

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

#17215
FILED

SEP 23 2005

TERESA L. DEPPNER, CLERK
U.S. District & Bankruptcy Courts
Southern District of West Virginia

CHESTER RONEY

Individually and as Executor of the
Estate of Henry Clay Roney, Jr.
P.O. Box 1047
109 Cedar Street
New Haven, West Virginia 25265

Case No.

Plaintiff,

vs.

**COMPLAINT AND JURY
DEMAND**

3:05-0788

GENCORP

Individually and as
successor-in-interest to
GENERAL TIRE AND RUBBER
COMPANY,
Serve at:
CT Corporation System
1300 East 9th Street
Cleveland, Ohio 44114-4411

and

AIR PRODUCTS & CHEMICALS, INC.

Serve at:
C T Corporation System
1300 E. 9th Street
Cleveland, Ohio 44114

and

THE AMERICAN CHEMISTRY COUNCIL

Individually and as successor-in-interest to the
MANUFACTURING CHEMISTS
ASSOCIATION and the CHEMICAL
MANUFACTURERS ASSOCIATION,

Serve at:
United States Corporation Company
80 State Street
Albany, New York 12207

and)
)
BORDEN CHEMICAL, INC.)
N/k/a HEXION SPECIALTY CHEMICALS,)
INC., f/k/a BORDEN, INC.)
Serve at:)
Prentice Hall Corporation)
50 West Broad Street)
Columbus, Ohio 43215-4321)
)

and)
)
CHEVRON U.S.A., INC.,)
Individually and as successor-in-)
interest to GULF OIL, CO.)
Serve at:)
Prentice Hall Corp.)
50 West Broad Street)
Columbus, Ohio 43215-4321)
)

and)
)
THE DOW CHEMICAL COMPANY)
Serve at:)
CT Corporation System)
1300 East 9th Street)
Cleveland, Ohio 44114-4411)
)

and)
)
ETHYL CORPORATION)
Serve at:)
330 S. 4th Street)
Richmond, Virginia 23219-4350)
)

and)
)
GEORGIA PACIFIC CORPORATION)
Serve at:)
133 Peachtree Street, NE)
Atlanta, Georgia 30303)
)

and)
)

GOODRICH CORPORATION,

Formerly known as

B.F. GOODRICH COMPANY,

Serve at:

CSC-Lawyers Inc. Svc.

50 W. Broad Street, Suite 1800

Columbus, Ohio 43215

and

**THE GOODYEAR TIRE AND RUBBER
COMPANY**

Serve at:

C. Thomas Harvie

1144 East Market Street

Akron, Ohio 44316-4431

and

HONEYWELL INTERNATIONAL, INC.

F/k/a known as ALLIED SIGNAL, INC.,

Individually and as successor-in-interest to

ALLIED CHEMICAL CORPORATION,

Serve at:

CSC-Lawyers Inc. Svc.

50 W. Broad Street, Suite 1800

Columbus, Ohio 43215

and

OLIN CORPORATION

Serve at:

818 W. 7TH Street

Los Angeles, California 90017

and

PACTIV CORPORATION

Individually and as successor-in-interest to

TENNECO, INC.

Serve at:

CT Corporation system

1300 East 9th Street

Cleveland, Ohio 44114-4411

and

PHARMACIA CORPORATION

Formerly known as MONSANTO
CORPORATION

Serve at:

C T Corporation

1300 E. 9th Street

Cleveland, Ohio 44114

and

POLYONE CORPORATION,

Individually and as successor-in-interest to

Serve at:

The GEON COMPANY

Suite 36-5000

200 Public Square

Cleveland, Ohio 44114-2304

and

PPG INDUSTRIES, INC.,

Serve at:

Prentice Hall Corp. System

50 West Broad Street

Columbus, Ohio 43215-4321

and

RHONE-POULENC, INC.,

N/k/a BAYER CROPSCIENCE,

Individually and as successor-

in-interest to STAUFFER

CHEMICAL COMPANY,

Serve at:

CT Corporation

1300 E. 9th Street

Cleveland, Ohio 44114

and

SHELL OIL COMPANY

Individually and as successor-in-interest to

SHELL CHEMICAL, INC.

Serve at:

C T Corporation system

1300 East 9th Street

Cleveland, Ohio 44114-4411)
)
and)
)
TENNECO AUTOMOTIVE, INC.)
Individually and as successor-in-interest to)
TENNECO, INC.)
Serve at:)
CT Corporation System)
1300 East 9 th Street)
Cleveland, Ohio 44114-4411)
)
and)
)
UNION CARBIDE CORPORATION)
Serve at:)
CT Corporation System)
1300 East 9th Street)
Cleveland, Ohio 44114-4411)
)
and)
)
UNIROYAL, INC.,)
Individually and as successor-in-interest to)
U.S. RUBBER CO. and UNIROYAL)
CHEMICAL COMPANY, INC.,)
Serve at:)
Prentice-Hall Corp. System)
50 West Broad Street)
Columbus, Ohio 43215)
)
and)
)
ZENECA, INC.)
Individually and as successor-in-interest to)
ICI AMERICAS, INC.)
Serve at:)
C T Corporation)
1300 E. 9 th Street)
Cleveland, Ohio 44114)
)

Now comes Chester Roney as the Executor of the Estate of Henry Clay Roney, Jr. to

present a wrongful death claim and a survivorship claim arising out of the injuries to and death of Henry Clay Roney, Jr. By and through his attorneys, plaintiff states upon information and belief as follows:

I. NATURE OF CLAIMS

1. This action is brought on behalf of all the decedent's next of kin, including his children, to assert all rights and remedies permitted with respect to a wrongful death action. Plaintiff therefore seeks damages that are fair and just for the following, proximately caused by the misconduct of defendants:

- a. Sorrow, mental anguish and solace, which may include society, companionship, comfort, guidance, kindly offices and advice of the decedent.
- b. Compensation for reasonably expected loss of income of decedent, and services, protection, care and assistance provided by decedent.
- c. Expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death, and
- d. Funeral expenses.

2. This action is also brought on behalf of the Estate of the decedent to assert all rights and remedies permitted with respect to a survivorship action for the pain and suffering, loss of income, medical expenses, loss of enjoyment of life and all other injuries and damages suffered by plaintiff's decedent prior to his death as a proximate result of defendants' misconduct.

3. This action is brought by plaintiff also on behalf of the Estate of Clara Marie Roney, decedent's spouse, for her losses, arising from the death of her husband, prior to her death.

4. Plaintiff's decedent was exposed to vinyl chloride, during the course of his employment in West Virginia, and died in West Virginia as a result of angiosarcoma of the liver.

II. PARTIES

5. The plaintiff, Chester Roney, is the son of the decedent, Henry Clay Roney, Jr., and the Executor of his estate.

6. There are three surviving children of the decedent, Chester Clay Roney, Sabrina Marie Delaney and Melissa Kay Roney.

7. The defendants are the following:

- AIR PRODUCTS & CHEMICALS, INC., which is incorporated in the state of Delaware and has its principal place of business in the state of Pennsylvania;
- THE AMERICAN CHEMISTRY COUNCIL, f/k/a THE CHEMICAL MANUFACTURERS ASSOCIATION AND THE MANUFACTURING CHEMISTS ASSOCIATION which is incorporated in the state of New York and has its principal place of business in the state of Virginia;
- BORDEN CHEMICAL, INC., formerly known as Borden, Inc. and which is incorporated in the state of New Jersey and which has its principal place of business in the state of Ohio;
- CHEVRON, U.S.A., successor-in-interest to GULF OIL COMPANY and which is incorporated in the state of Delaware and which has its principal place of business in the state of California;
- THE DOW CHEMICAL COMPANY, which is incorporated in the state of Delaware and has its principal place of business in the state of Texas;
- ETHYL CORPORATION, which is incorporated in the Commonwealth of Virginia and has its principal place of business in the Commonwealth of Virginia;
- GENCORP, Individually and as Successor-in-interest to GENERAL TIRE AND RUBBER COMPANY which is incorporated in the state of Delaware and has its principal place of business in the state of Ohio;
- GEORGIA PACIFIC CORPORATION, which is incorporated in the state of Delaware and has its principal place of business in the state of Georgia;

- GOODRICH CORPORATION, formerly known as B.F. GOODRICH COMPANY which is incorporated in the state of New York and has its principal place of business in the state of North Carolina;
- GOODYEAR TIRE AND RUBBER COMPANY, which is incorporated in the state of Ohio and has its principal place of business in the state of Ohio;
- HONEYWELL INTERNATIONAL, INC., formerly known as ALLIED SIGNAL, INC., Individually and as Successor-in-interest to ALLIED CHEMICAL CORPORATION which is incorporated in the state of Delaware and has its principal place of business in the state of New Jersey;
- OLIN CORPORATION, which is incorporated in the State of Virginia and has its principal place of business in the State of Connecticut;
- PACTIV CORPORATION, which is incorporated in the state of Delaware and has its principal place of business in the state of Illinois;
- PHARMACIA CORPORATION, formerly known as MONSANTO CORPORATION, which is incorporated in the state of Delaware and which has its principal place of business in the state of Missouri;
- POLYONE CORPORATION, formerly known as Geon, Inc., and which is incorporated in the state of Delaware and has its principal place of business in the state of Ohio.
- PPG INDUSTRIES, INC. which is incorporated in the state of Pennsylvania and has its principal place of business in the state of Pennsylvania; and PPG Ohio, Inc., a separate entity from PPG Industries, Inc., an Ohio Corporation with its principal place of business in Ohio, and collectively these defendants will herein be referred to as the PPG defendants.
- RHONE-POULENC, INC., Individually and as Successor-in-interest to STAUFFER CHEMICAL COMPANY which is incorporated in the state of Pennsylvania and has its principal place of business in the state of Pennsylvania;
- SHELL OIL COMPANY, individually and as successor-in-interest to Shell Chemical, Inc. and Shell Chemical Company, and which is incorporated in the state of Delaware and which has its principal place of business in the state of Texas;

- TENNECO AUTOMOTIVE, INC., which is incorporated in the state of Delaware and has its principal place of business in the state of Texas;
- UNION CARBIDE CORPORATION, which is incorporated in the state of New York and has its principal place of business in the state of Connecticut;
- UNIROYAL, INC., Individually and as successor-in-interest to U.S. RUBBER CO. which is incorporated in the state of New York and has its principal place of business in the state of Connecticut;
- ZENECA, INC., individually and as successor-in-interest to ICI Americas, Inc., and which is incorporated in the state of Delaware and which has its principal place of business in the state of Delaware.

8. Defendants can be organized into three categories as follows:

- a. Plaintiff's decedent was employed by Pantasote, Inc. at the Point Pleasant, West Virginia, polymerization plant. On or about May 10, 1973, General Tire & Rubber Co., now known as Gencorp, Inc., acquired an undivided one-half interest in the plant. Pantasote is no longer in existence. Plaintiff's claims are therefore asserted against Gencorp as decedent's remaining employer and are for an employer intentional tort and fraud, including claims pursuant to W. Va. Code § 23-4-2(d)(2)(i) and (ii), as well as tortious misconduct in the furtherance of a conspiracy with the other defendants.
- b. The Manufacturer/Supplier defendants produced the vinyl chloride to which decedent was exposed during the course of his employment at the Point Pleasant plant. These defendants engaged in a breach of duty to warn, product liability violations and fraud by taking active steps to misrepresent and conceal the health hazards associated with vinyl chloride; conspired with Pantasote and Gencorp to commit an employer intentional tort and fraud; and provided substantial

assistance to, so as to aid and abet Pantasote and Gencorp in the commission of the employer intentional tort and fraud; and

c. The Conspiracy defendants conspired with and aided and abetted Pantasote and Gencorp to commit the employer intentional tort and employer fraud. They also entered into agreements with the Manufacturer/Supplier defendants to conspire to fraudulently misrepresent and conceal the hazards of vinyl chloride and took actions to substantially aid and abet the Manufacturer/Supplier defendants.

9. Upon information and belief, at all times material hereto, the following named defendants, were all manufacturers, producers, suppliers and sellers of the Vinyl Chloride Monomer (VCM) which was used at the Point Pleasant Plant, during the period when the plaintiff's decedent's exposure to vinyl chloride occurred, and are hereinafter described collectively as the "Manufacturer/Supplier defendants":

- a. Borden Chemical, Inc.
- b. Dow Chemical Company
- c. Ethyl Corporation
- d. Georgia Pacific, Inc.
- e. Goodrich Corporation, f/k/a B. F. Goodrich Company
- f. Honeywell International, Inc., formerly known as Allied Signal, Inc., and successor-in-interest to Allied Chemical Corporation
- g. Monsanto Corporation
- h. Pactiv, Inc., successor-in-interest to Tenneco, Inc.
- i. PPG Industries, Inc.

- j. Shell Oil Company
- k. Tenneco Automotive, Inc., successor-in-interest to Tenneco, Inc.
- l. Union Carbide Corporation
- m. Uniroyal, Inc.

10. The following defendants, in addition to the Manufacturer/Supplier defendants and plaintiff's decedent's employer, defendant B.F. Goodrich, are collectively referred to as the "conspiring defendants":

- a. Air Products & Chemicals, Inc.
- b. The American Chemistry Council, f/k/a The Chemical Manufacturers Association and the Manufacturing Chemists Association
- c. Borden Chemical, Inc.
- d. Dow Chemical Company
- e. Ethyl Corporation
- f. Georgia Pacific, Inc.
- g. Honeywell International, Inc., formerly known as Allied Signal, Inc., and successor-in-interest to Allied Chemical Corporation.
- h. The Goodyear Tire and Rubber Company
- i. Gulf Oil Corporation, individually and as successor in interest to Chevron U.S.A., Inc.
- j. Olin Corporation
- k. PolyOne Corporation, successor-in-interest to Tenneco, Inc.
- l. Rhone-Poulenc, Inc., individually and as successor-in-interest to Stauffer Chemical Company
- m. Zeneca, Inc., f/k/a ICI Americas, Inc.

III. JURISDICTION AND VENUE

11. This court has subject matter jurisdiction over this matter because an overwhelming

amount of defendants' wrongful conduct that proximately caused the injuries to, and death of, Henry Clay Roney, occurred within the State of West Virginia.

12. This court has personal jurisdiction over each of the defendants because defendants committed wrongful acts in this State that proximately caused the injuries to, and death of, Henry Clay Roney.

13. Venue properly lies in this court because a substantial amount of the wrongful activities conducted by defendants that proximately caused the injuries to and death of plaintiff's decedent and gave rise to plaintiff's claims for relief, occurred in Mason County.

14. Decedent's employers, Pantasote and defendant Gencorp, operated their Point Pleasant plant in Mason County, West Virginia. The Manufacturer/Supplier defendants conducted business in Mason County, West Virginia, shipping vinyl chloride to the plant in which decedent worked.

15. The conspiracy defendants conducted business in West Virginia and engaged in tortious conduct in West Virginia by conspiring with and aiding and abetting decedent's employers and the Manufacturer/Supplier defendants.

IV. BACKGROUND

16. Plaintiff's decedent was first employed by Pantasote, Inc. at its Point Pleasant, West Virginia plant in 1965 and remained an employee working at that plant until 1982. In May of 1973, General Tire and Rubber became an owner of an undivided 1/2 interest in the plant and thus also an employer of the plaintiff's decedent.

17. During the course of his employment at the Point Pleasant plant, plaintiff's decedent worked as a reactor cleaner and operator, cleaning tanks, vessels and vats, handling raw

materials, operating machinery and performing various other tasks. All of these jobs involved working with and being exposed to vapor, steam and fumes containing vinyl chloride monomer (VCM or vinyl chloride). VCM is a colorless gas and can remain in a gaseous state at room temperature. The odor threshold for VCM is at or above 2,000 ppm. Plaintiff's decedent could often smell the vinyl chloride while he was working.

18. While engaged in the course of decedent's employment at Point Pleasant plant, Mr. Roney was required and caused to work with, and in the vicinity of vinyl chloride monomer.

19. The exposure of Henry Clay Roney to vinyl chloride was the direct and proximate cause of his developing a cancer of the liver known as hepatic angiosarcoma. He first experienced symptoms on or about September 30, 2003, and died a painful, premature and wrongful death on October 4, 2003, all as a direct and proximate result of the misconduct of the defendants herein.

20. Prior to his death, plaintiff's decedent incurred substantial medical expenses, suffered severe pain of mind and body, disability, limitation, and loss of the pleasures of life. His symptoms included chills, fever, pain, seizures and becoming non-ambulatory. In addition, he lost income and lost earning capacity as well as a loss of future income and the pleasures of the longer and fuller life he would have otherwise enjoyed, all as a direct and proximate result of the conduct of defendants herein.

21. The conduct of the defendants as described herein was the direct and proximate cause of the next of kin of Henry Clay Roney, including his now deceased wife and his children, having lost his support, society, companionship, love and affection and other damages, including mental anguish and grief at his untimely, wrongful and painful death.

22. Plaintiff's claim against defendant Gencorp, one of decedent's employers, is based upon the fact that defendant Gencorp committed an intentional tort and fraud, deliberately misrepresenting and withholding information about the known dangers of exposure to VC from decedent during his employment. Plaintiff's claims against defendant Gencorp arise under W. Va. Code § 23-4-2 (d)(2)(i) and (ii).

23. Plaintiff's claims against the Manufacturer/Supplier defendants of the VC to which plaintiff's decedent was exposed are based on a conspiracy with, and aiding and abetting, Pantasote and Gencorp, in the commission of the employer intentional tort and fraud, as well as the Manufacturer/Supplier's fraudulent concealment, breach of duty to warn, and product liability violations arising out of the deliberate and intentional breach of their duty to warn plaintiff's decedent of known hazards and dangers of VC.

24. The "conspiring defendants" are members of the VC/PVC industry, a small, closely coordinated industry which contained fewer than 30 companies who bought and sold products to each other as well as regularly made swaps and exchanges of their fungible vinyl chloride and polyvinyl chloride products. They also include the trade organizations through which the members of the VC/PVC industry routinely acted. The plaintiff's claims against these additional defendants are for a conspiracy with, and aiding and abetting, Pantasote and Gencorp in the commission of the employer intentional tort and fraud, and for conspiring with and aiding and abetting the Manufacturer/Supplier defendants in their fraudulent concealment, breach of duty to warn and product liability violations. The trade associations and other defendants are each sued solely based upon their own tortious acts. No party is sued on the mere basis of attendance at trade association or scientific meetings or for merely belonging to a trade association. The

defendants agreed and aided and abetted one another to take the following actions:

- a. Draft, publish and distribute SD-56 to fraudulently misrepresent and conceal defendants' knowledge about the dangers of vinyl chloride.
- b. Conduct false and misleading medical and epidemiological studies for sole purpose of concealing and misrepresenting the known dangers of exposure to vinyl chloride.
- c. Enter into a written secrecy pact regarding their knowledge of the carcinogenicity of vinyl chloride.
- d. Misrepresent the "odor threshold" of vinyl chloride (the level at which a substance can be smelled) in order to misrepresent workers', including plaintiff's decedent's, exposures to vinyl chloride.
- e. Disclose to workers, customers, the government and the public only those hazards they agreed to disclose in SD-56 so as to maintain a unified and consistent front that fraudulently concealed the vinyl chloride dangers and hazards defendants knew existed.

25. All of the actions by Pantasote and defendants alleged in plaintiff's complaint were taken intentionally, purposely, deliberately and without justification.

**PARTICULARIZED ALLEGATIONS REGARDING THE MATERIAL
MISREPRESENTATIONS, CONSPIRACY AGREEMENT AND SUBSTANTIAL
ASSISTANCE AMOUNTING TO AIDING AND ABETTING.**

A: Agreement to draft, publish and distribute SD-56 to fraudulently conceal defendants knowledge about the dangers of vinyl chloride.

26. In or about 1930, Patty and the U.S. Bureau of Mines conducted a study of the acute toxic effects of vinyl chloride on guinea pigs. The study indicated injury to the liver and

spleen.

27. Pantasote and defendants recommended a TLV of 500 ppm largely as a result of a single guinea pig study even though there was no documentation of the systemic, chronic effects from long-term exposures at or below this level. Pantasote and Gencorp recommended this 500 ppm exposure limit for polyvinyl chloride (PVC) plants and fabrication facilities for decades in spite of their knowledge that there was no scientific evidence supporting 500 ppm as a safe level for chronic injury or liver damage.

28. Pantasote and defendants accepted and recommended the 500 ppm exposure limit based exclusively on the Patty and the U.S. Bureau of Mines guinea pig study.

29. During the ensuing years, multiple studies indicated that VC caused liver injuries to exposed workers. These studies included a 1949 report of liver injury among Russian vinyl chloride workers; a 1957 Russian study again reporting liver injuries in VC workers; a 1959 Dow Chemical study showing liver damage in animals from exposures to VC as low as 100 ppm (and an inability to identify a "no-effect" level), resulting in Dow Chemical adopting a 50 ppm exposure limit for its own plants; a 1959 Canadian study showing liver injury to animals exposed to vinyl chloride (resulting in Ontario, Canada lowering the exposure limit from 500 ppm to 50 ppm); and a 1963 Romanian study finding liver disease in vinyl chloride workers.

30. In 1953, the Manufacturing Chemists Association (MCA) (later named the Chemical Manufacturing Association or "CMA" and then the American Chemical Council or the "ACC"), the trade association for the American chemical industry throughout all times relevant to the instant action, along with the active participation of its General Safety Committee, drafted a chemical safety data sheet for VC, known as SD-56. Continental Oil Company (Conoco), Dow

Chemical Company, Ethyl Corporation, PPG Industries Inc., Union Carbide Corporation, Tenneco, Allied Chemical, Pantasote and B.F. Goodrich, among others, participated in the process of drafting, approving, revising, publishing and disseminating SD-56.

31. In spite of the information contained in studies known to defendants and the absence of test data identifying a safe exposure limit, particularly with respect to either long term exposures or chronic injuries, SD-56 stated 500 ppm was a safe exposure limit and that the only hazards from VC were fire, explosion, frostbite burns and a mild general anesthesia.

32. Pantasote and defendants agreed to disseminate SD-56, and nothing contrary to SD-56, in order to conceal the hazards of vinyl chloride from workers, including plaintiff's decedent. They further agreed that they would reject and prevent any changes to SD-56 that might disclose complete and accurate information about vinyl chloride health hazards.

33. SD-56 fraudulently concealed known facts about VC. In spite of Pantasote and defendants' knowledge to the contrary, and their knowledge that they lacked the facts to make such assertions, SD-56 stated:

8. HEALTH HAZARDS AND THEIR CONTROL

8.1 Hazards

8.1.1 GENERAL

Aside from the risk of fire or explosion, vinyl chloride presents no other very serious problem in general handling. The presently accepted maximum allowable concentration is 500 ppm.

8.1.2 SYSTEMIC EFFECTS

In concentrations well above 500 ppm, vinyl chloride acts as a mild general anesthetic.

8.1.3 LOCAL EFFECTS

In contact with the skin vinyl chloride is irritating. Prolonged contact will result in refrigeration and freezing.

8.2 Prevention and control

Vinyl chloride is not a serious industrial hazard provided precautions are taken to avoid leaks or spills which might provide a fire or explosion hazard.

34. SD-56 was distributed by Pantasote, Gencorp and the Manufacturer/Supplier defendants to employees and customers with the intent that it be relied upon throughout the industry and by workers, including plaintiff's decedent, but to disclose only the mild hazards of vinyl chloride which defendants wished to disclose. SD-56 was relied upon throughout the VC and PVC industry, and by the plaintiff's decedent.

35. Pantasote and defendants agreed to disseminate SD-56 throughout the VC and PVC industry, knowing it to be false and fraudulent, and intending it to be used by employers, including Pantasote and Gencorp, to train employees in the industry.

- a. Herman Waltemate, a safety manager for B.F. Goodrich, testified that the training provided by B.F. Goodrich to its employees was based upon the information in SD-56 and that prior to about 1969 no other information was provided.
- b. Bruce Eley, a former industrial hygienist who worked in PVC plants for Monsanto, executed an affidavit in which he stated "when I started work with Monsanto in 1969, SD-56 was relied on throughout the industry to disclose the hazards of vinyl chloride and that the only hazard it disclosed is mild irritation and exposure";
- c. B.F. Goodrich, in Answers to Interrogatories, stated that the only warnings it made available to vinyl chloride purchasers between 1952 and 1974 was through SD-56;
- d. Union Carbide's R.N. Wheeler admitted under oath in 1999 that Union Carbide

distributed SD-56 throughout the 1950's and 1960's to its customers despite it not being reflective of Union Carbide's internal policy for exposure limits to vinyl chloride; and

36. On October 2, 1953, MCA's A.J. Wuertz, Secretary of the MCA General Safety Committee, wrote to the members of the General Safety Committee and the MCA Medical Advisory Committee regarding distribution of SD-56. This letter identified the producers and users of vinyl chloride responsible for that particular draft of SD-56 as B.F. Goodrich, Dow Chemical, Firestone, Goodyear and Uniroyal.

37. On May 12, 1959, V.K. Rowe of Dow Chemical wrote to B.F. Goodrich's Corporate Industrial Hygienist, W.E. McCormick, regarding vinyl chloride's chronic toxicity and the inadequacy of the then existing exposure standard published by the American Conference of Governmental Industrial Hygienists stating: "We feel quite confident, however, that 500 ppm is going to produce rather appreciable injury when inhaled seven hours a day, five days a week for an extended period." This information was not provided to plaintiff's decedent. In spite of its knowledge that 500 ppm was not a safe exposure limit, Dow continued to publicly support that limit and disseminated SD-56, in furtherance of the⁴ conspiracy among defendants.

38. By 1961, Dr. Torkelson published Dow Chemical's animal study as a scientific article in a technical scientific journal. Pantasote and defendants did not distribute this information to their employees and agreed not to change SD-56. In particular, Pantasote and Gencorp did not inform plaintiff's decedent or other employees in their plants of this information. Pantasote and defendants continued to assure workers and others that they could rely on the SD-56 statement that exposure below 500 ppm was safe.

39. On November 24, 1959, Union Carbide acknowledged in inter-company correspondence that the TLV of 500 ppm had been "based largely on single guinea pig inhalation studies by the Bureau of Mines about 25 years ago." The letter also noted that V.K. Rowe had stated that Dow Chemical's inhalation study "has not found a no-effect level. Even 100 ppm produced organ weight changes and gross pathology with micropathology expected. The author concluded that vinyl chloride monomer is more toxic than has been believed." Pantasote and the defendants agreed among themselves that SD-56 would not be changed and continued to tell the world, including the plaintiff's decedent, that exposure to vinyl chloride below 500 ppm was safe; nor did Pantasote or any of the defendants seek to inform plaintiff's decedent of the toxicity of VC.

40. In 1963, a Romanian study was published by Dr. Suciu finding liver damage in workers, including hepatomegaly caused by vinyl chloride. The study, which Pantasote and defendants obtained, noted that the liver damage could become chronic.

41. On March 18, 1963, MCA investigated medical literature addressing the "carcinogenic effects of plastics," including nine articles about cancers resulting from implanted plastics. This information was not provided to plaintiff's decedent or other workers being exposed to vinyl chloride.

42. On June 7, 1965, Rex Wilson of B.F. Goodrich wrote to a doctor treating a B.F. Goodrich employee who was suffering from liver damage caused by vinyl chloride exposure. Rex Wilson wrote that VC was recognized in "our experience" as a hepatotoxin and noted that because of this knowledge, B.F. Goodrich conducted liver function tests on exposed workers. Yet, B.F. Goodrich Safety Director, Herman Waltemate, testified that he did not learn that VC

was a hepatotoxin until a decade later. Nor was this information provided to plaintiff's decedent.

43. On October 13, 1965, William McCormick, a senior corporate officer at B.F. Goodrich, sent to Dr. Kelly of Monsanto a copy of a Romanian study that described the development of liver damage in PVC workers. Mr. McCormick instructed that the paper and its conclusions were to be held in strictest confidence.

44. On April 6, 1966, B.F. Goodrich's William McCormick wrote an internal memorandum to B.F. Goodrich Vice President Anton Vittone in which he noted that the American Conference of Governmental Industrial Hygienists (ACGIH) was again proposing that the 500 ppm TLV for vinyl chloride be reduced to 50 ppm. Pantasote and defendants continued to declare in SD-56 that the safe exposure level was 500 ppm. Pantasote and defendants took steps to ensure ACGIH did not lower the TLV below the 500 ppm recommended by defendants' in SD-56.

45. On October 6, 1966 the Manufacturing Chemists Association (MCA) PVC resin producers and the MCA Occupational Health Committee met in Cleveland, Ohio. The group discussed acroosteolysis, a disease suffered by vinyl chloride workers, which they said had never been previously observed. B.F. Goodrich's data was presented and it was specifically recognized that there was a definite health problem related to polyvinyl chloride manufacture. B.F. Goodrich requested that participants maintain the secrecy of the problem to which the other participants agreed. The information was to be treated as confidential. Any new finding was to be communicated to MCA or B.F. Goodrich's Dr. Wilson. Representing and acting officially on behalf of their employers in this meeting were:

- (i) B.F. Goodrich (W.E. McCormick, Rex H. Wilson, M.D., Wade Miller, Thomas B. Nantz and A. Vittone),
- (ii) Allied Chemical (Dr. R.D. Williams),

- (iii) Atlantic Tubing and Rubber (Dan Carberry and Glenn D. Smith),
- (iv) Borden Chemical (Nathan Blackman),
- (v) Cumberland Chemical Corp. (Dr. P.W. Townsend and J.A. Bourque, Jr.),
- (vi) Diamond Alkali (Dr. Richard W. McBurney and L.E. Ice),
- (vii) Dow Chemical (H. L. Gordon, M.D. and Earl R. Smith),
- (viii) Ethyl Corporation (Dr. George Roush),
- (ix) Firestone Plastics Co. (C.J. Kleinert),
- (x) General Tire and Rubber (Phillip R. Sayre and George Burkhardt),
- (xi) Goodyear Tire and Rubber Company (F.A. Cox and Dr. C.A. Johnson),
- (xii) Great American (Albert W. Fuhrman),
- (xiii) Hooker (Jerome Wilkenfeld),
- (xiv) Pantasote (John E. Frtel),
- (xv) Shawinigan (Dr. R.H. Stevenson),
- (xvi) Stauffer (H.R. Jepson and Don Hunter),
- (xvii) Tenneco (Elwood W. Phares and Robert R. Bouffard),
- (xviii) Thompson Apex, Union Carbide (C.U. Dernehl, M.D. and R.N. Wheeler, Jr.),
- (xix) U.S. Rubber (C.B. Westerhoff and J.H. Wolfsie, M.D.).

46. In a memorandum dated June 21, 1968, B.F. Goodrich's J. DiSalvo acknowledged that exposure of animals to VC at 500 ppm caused liver damage. Pantasote and defendants did not inform plaintiff's decedent or employees in their plants of this fact.

47. On January 26-27, 1970, the members of the MCA Safety and Fire Protection Committee met in New York City, New York and discussed revising chemical safety data sheets. Despite the fact that revisions to the SD-56 were being discussed and that the committee had clear evidence that exposure to vinyl chloride at 500 ppm was dangerous to workers' health, this group again refused to revise the safety data sheet to institute a lower ppm exposure level.

Representing and acting officially on behalf of their employers were:

- (i) Monsanto Company (G.L. Gorbell),
- (ii) The Dow Chemical Company (S.M. MacCutcheon),
- (iii) Olin Corporation (W.P. Paulsen),
- (iv) Allied Chemical Corporation (S. Schrieber),
- (v) Union Carbide Corporation (J.J. Walker),
- (vi) Manufacturing Chemists Association (F.G. Stephenson),
- (vii) Society of the Plastics Industry (A.L. King).

48. At the MCA Safety and Fire Protection Committee (SFPC) December 14, 1971 meeting in Washington, D.C., the participants again refused to change the 500 ppm exposure limit in SD-56. Representing and acting officially on behalf of their employers were:

- (i) Allied Chemical Corporation (Sanford Schreiber),
- (ii) B.F. Goodrich (D.L. Dowell),
- (iii) Monsanto Company (G.L. Gorbell),
- (iv) The Dow Chemical Company (S.M. MacCutcheon),
- (v) Union Carbide Corporation (J.J. Walker),
- (vi) Manufacturing Chemists Association (F.G. Stephenson).

49. On March 7, 1972 the MCA drafted a revised version of SD-56. In section 10, SD-56 stated that "vinyl chloride monomer does not present a serious industrial health hazard provided workers are adequately supervised and observe the proper means of handling it." Despite explicit knowledge to the contrary, SD-56 yet again assured that exposures up to 500 ppm were safe and that this level "provides considerable margin of safety for industrial exposures."

50. On May 29, 1973, B.F. Goodrich's Benjamin M.G. Zwicker wrote an internal memorandum to the B.F. Goodrich plant Managers entitled "Proposed Information Response to Employee Questions." The attached draft memo entitled "Human Health Effects of Vinyl Chloride" falsely states "We know of no serious problems with our employees from the proper use of vinyl chloride in our plants."

51. On May 31, 1973, R.N. Wheeler of Union Carbide sent a confidential memo discussing the plans of The Society of the Plastics Industry (SPI) approval for the use of PVC for drinking containers and to identify only the hazards identified in SD-56. In addition, the defendants decided that through the MCA Vinyl Chloride Research Projects Group, they would meet with NIOSH, but only disclose the hazards of SD-56 while concealing information they had regarding the carcinogenicity of vinyl chloride. In discussing these two actions, in which

Pantasote and many of the defendants participated actively and others were informed, Wheeler admitted in a memorandum that the actions "could be construed as evidence of an illegal conspiracy."

52. On July 20, 1973, G.E. Best of the MCA wrote to the "management contacts" at companies sponsoring the Vinyl Chloride Research Program and the MCA Technical Task Group on Vinyl Chloride Research regarding the industry meeting with NIOSH on July 17, 1973. He indicated that despite definite knowledge to the contrary, the defendants only gave NIOSH a copy of SD-56, which stated that exposure to vinyl chloride at levels less than 500 ppm was safe. The "management contacts" active at that time who received this information indicating a cover-up of vinyl chloride hazards were the following:

- (i) Air Products (Smith, Carey),
- (ii) Allied Signal (Knapp, Ferguson),
- (iii) B.F. Goodrich (McCormick, Johnson, Benjamin M.G. Zwicker and Dowell),
- (iv) Borden (Schmidt),
- (v) Conoco (Kennedy),
- (vi) Diamond Shamrock (McBurney, Zimmerman),
- (vii) Dow Chemical (Torkelson, Leathers and Rausch),
- (viii) Ethyl (Rinehart),
- (ix) Firestone (Madden),
- (x) Goodyear (Johnson, Francis),
- (xi) Monsanto (Roush),
- (xii) Olin (Gasque and O'Connell),
- (xiii) PPG (Bell, Widing),
- (xiv) Shell (Maycock),
- (xv) Stauffer (Lindquist),
- (xvi) Tenneco (Rosen and Aalto),
- (xvii) Union Carbide (Wheeler),
- (xviii) Uniroyal (Harris).

53. None of the "management contacts" took any steps to correct the misinformation provided to NIOSH. In particular, neither B.F. Goodrich nor any of the other defendants disclosed to NIOSH that vinyl chloride was known by them to be a hepatotoxin.

54. On November 28, 1973, the Vinyl Chloride Research Coordinators of MCA met to review and ratify the false information in the SD-56. Participants were:

- (i) The Dow Chemical Company (T.R. Torkelson),
- (ii) Tenneco Chemicals, Inc. (T.E. Aalto for Marvin Rosen),
- (iii) PPG Industries, Inc. (Z.G. Bell, Jr.),
- (iv) Uniroyal, Inc. (W.D. Harris),
- (v) Olin Corporation (Richard Henderson for M.R. Gasque),
- (vi) Goodyear Tire & Rubber Company (C.A. Johnson),
- (vii) B.F. Goodrich Company (M.N. Johnson, M.D.),
- (viii) Shell Chemical Company (H.L. Kusnetz for R.L. Maycock),
- (ix) Stauffer Chemical Company (A.B. Lindquist),
- (x) Ethyl Corporation (W.E. Rinehart).

55. On May 24, 1974, the MCA, on behalf of its members, issued a press release containing a chronology of knowledge about vinyl chloride hazards. The chronology issued by the MCA affirmatively misstated the known hazards of exposure to VC and was incomplete and misleading by concealing the historical knowledge and historical research concerning vinyl chloride. It was only in this document that defendants, through the MCA, disclosed that they had known for decades prior to 1974 that exposure to vinyl chloride caused liver damage.

56. At a meeting on December 7, 1974 of the SPI VCM/PVC Producers Group Committee in Washington, D.C., the following people met and ordered the public relations firm of Hill and Knowlton to publish pamphlets for PVC workers assuring them that they were not exposed to hazardous levels of vinyl chloride, even though Pantasote and these defendants knew that this was inaccurate and had no factual basis:

- (i) Conoco (Edward R. Adwon and Flynt Kennedy),
- (ii) Olin (Henry Bialecki and William A. Sutton),
- (iii) SPI (Chuck Bigler, Ralph L. Harding, John R. Lawrence and E.S. Nuspliger),
- (iv) Great American (Bertram M. Cohen, John G. Floros, Melvin Rosensaft and Richard M. Zinner),
- (v) B.F. Goodrich (H.J. Fast, Cleveland Lane and John Nelson),
- (vi) Tenneco (Joe Fath and Frank Ritter),
- (vii) Goodyear (John M. Gilmore and Milton J. Rhoad),

- (viii) Pantasote (Jack Jaglom),
- (ix) Borden (Dr. Milton Kline),
- (x) Allied (W.C. Koch),
- (xi) General Tire (R.W. Laundrie),
- (xii) Stauffer (A.B. Lindquist and Pat Watson),
- (xiii) PPG (Dennis E. McArdle),
- (xiv) Diamond (Marshall L. Miller),
- (xv) Dow Chemical (Duane Nuechterlein and Donna J. Roberts),
- (xvi) Firestone (Russell A. Park),
- (xvii) Shell (K.L. Spalding),
- (xviii) Air Products (Joseph Scastianelli),
- (xix) Union Carbide (A.B. Steele),
- (xx) Ethyl (Raymond M. Wolber),
- (xxi) Uniroyal (Richard Weller).

57. On August 21, 1974 at the Tunney Senate hearings on vinyl chloride, SPI's Ralph Harding, the President of B.F. Goodrich, and Dow Chemical's Technical Specialist Ted Torkelson testified. Each witness falsely portrayed the historical knowledge as it related to vinyl chloride and vinyl chloride research by concealing the industry's knowledge of the hazards going back to the 1940's and 1950's.

58. As late as July 16, 1976, Dow Chemical's Torkelson wrote the MCA's Technical Staffer, Milton Freifeld. Torkelson, who was then chairman of the CMA and SPI vinyl panels, stated that he had considered the request of the MCA Safety and Fire Protection Committee to revise SD-56, but that the Technical Task Group on Vinyl Chloride Research had previously decided not to revise SD-56.

59. On November 29, 1978, at the request of its members, SPI published a booklet to provide to its members' workers entitled, "*PVC, Health and Safety*". The booklet was misleading concerning the present and historical information concerning vinyl chloride and health hazards. It falsely advised workers that the cancer hazard of vinyl chloride in the workplace had been eliminated.

B: Agreement to conduct false and misleading medical and epidemiological studies for the sole purpose of concealing and misrepresenting the known dangers of exposure to vinyl chloride.

60. Pantasote and defendants knew when they first began manufacturing and working with vinyl chloride that the liver was a target organ damaged by exposure to vinyl chloride. Studies repeatedly confirmed the liver was a target organ damaged by vinyl chloride exposure. Pantasote and defendants then learned that VC caused cancers at multiple human locations including, but not limited to, the brain and liver and also knew that these cancers were caused by exposures that were typical of on-going operations. In spite of this knowledge, defendants continued to adhere to and recommend the TLV of 500 ppm knowing they had no reliable scientific data upon which to base their fraudulent representations that exposures below that level were safe. These fraudulent misrepresentations were continually made in spite of data known to Pantasote and defendants indicating exposures below 500 ppm caused damage to the liver and other organs.

61. At least as early as 1963 or 1964, defendant B.F. Goodrich was testing the liver function of workers because of their knowledge of the hepatotoxicity of vinyl chloride. The workers at B.F. Goodrich were not told of the purpose of the exams or of B.F. Goodrich's knowledge that vinyl chloride was toxic to the liver. Nor did Pantasote or any of the defendants provide this information to the plaintiff's decedent.

(1) Acroosteolysis Studies

62. On November 12, 1964, B.F. Goodrich's Corporate Medical Director, Rex Wilson, wrote to Dr. J. Newman in Avon Lake, Ohio, where a B.F. Goodrich plant was located. Dr. Wilson, digging for information about acroosteolysis, stated that B.F. Goodrich wanted

employees examined for "hand disabilities" as quietly as possible. Dr. Wilson also wanted the examinations to occur as rapidly as possible but only incidental to other examinations. Dr. Wilson instructed, "we do not want to have this discussed at all, and I request that you maintain this information in confidence."

63. On February 2, 1965, Robert A. Kehoe (Kettering Laboratory) wrote to Monsanto's Medical Director, R. Emmet Kelly, M.D. Kehoe discussed the B.F. Goodrich hand problem, but instructed: "I shall be entirely willing, and am authorized to give you full information about this verbally, but I am not revealing the locus of the problem in writing at this time, since the people involved are deeply concerned despite the fact that there are very few cases, none of which has resulted in disability. It is difficult not to conclude, on the face of the evidence, poor as it is, that this is an occupational disease."

64. On January 6, 1966, Monsanto's J. V. Wagner wrote an internal memorandum reflecting a conversation with B.F. Goodrich's Harry Warner, Corporate Vice President, in which Warner stated that B.F. Goodrich had first noticed the hand problem in workers several years before and that the problem had been noticed in employees who were not involved in kettle cleaning. Warner also told Wagner about a Belgian doctor who had seen these problems in PVC workers and was about to publish an article. According to Wagner's memo, "Goodrich was concerned enough about the response to such a published article that Mr. Warner attempted to have one of their representatives, who was in Europe, stop by and try to discourage or influence the wording of such an article to be sure that it didn't condemn PVC in general."

65. On January 7, 1966, Dr. Kelly of Monsanto circulated an internal memorandum regarding his meeting with B.F. Goodrich. The memo noted that Monsanto was x-raying people

who were working in PVC polymerization. Dr. Kelly stated, "I am sure Dr. Nessell can prepare these people with an adequate story so that no problem will exist." Dr. Kelly also noted that he had to keep in contact with B.F. Goodrich because Dr. Wilson was on his way to Brussels to try and stop the publication of a paper. Dr. Kelly stated, "while this is not completely hush hush, I think discretion should be used to prevent any undue talking, and the name of Goodrich should be kept in the background."

66. On February 11, 1966, B.F. Goodrich's Dr. Rex Wilson M.D., wrote a confidential, internal company letter to Dr. Creech who cared for employee's at the B.F. Goodrich facility located at Louisville, Kentucky. In this correspondence, Wilson asked Dr. Creech to "examine these people and determine whether or not they have any existing symptoms commensurate with Raynaud's disease or scleroderma." Included on the list of B.F. Goodrich employees that Dr. Wilson informed Dr. Creech to examine was their first acroosteolysis case, manifesting in 1957. Wilson informed Creech that arrangements for a study by the Kettering Laboratory of Cincinnati, Ohio were made. The results of Kettering's study have never been released by defendants.

67. On December 21, 1966, the MCA Occupational Health Committee met in New York, NY. It was decided that the association would enter into a contract with the University of Michigan for an epidemiological study of acroosteolysis. Representing and acting officially on behalf of their employers in this meeting were:

- (i) B.F. Goodrich (W.E. McCormick and Rex H. Wilson, M.D.),
- (ii) Union Carbide (C.U. Dernehl, M.D.),
- (iii) Monsanto (M.N. Johnson, M.D.),
- (iv) Minnesota Mining and Manufacturing (J.A. Pendergrass),
- (v) United States Rubber (J.H. Wolfsie, M.D.),
- (vi) MCA (F.H. Carman).

68. On August 21, 1967, B.F. Goodrich published the article "*Occupational*

Acroosteolysis" in the *Journal of the American Medical Association*. This article was written by B.F. Goodrich management personnel Dr. Rex Wilson, M.D., William McCormick and Carroll Tatum along with contract physician, Dr. John Creech, M.D. In the article they stated that the cause of acroosteolysis was "not presently known." The article also stated that the syndrome "may" be of occupational origin. Contrary to the article, Wilson and McCormick understood that acroosteolysis was directly related to vinyl chloride exposure. Dr. Creech has admitted under oath that he saw a draft of this paper where it was specifically stated that vinyl chloride was the cause of acroosteolysis, but this admission was deleted from the final published paper. The paper also falsely implied that the complaints began in mid-1964, when in fact they date back to the 1950's.

69. On March 25, 1968, B.F. Goodrich received a proposal from Brooklyn Polytechnic Institute in which Brooklyn Polytechnic Institute submitted a request for continued support for the vinyl chloride acroosteolysis work carried out under the sponsorship of B.F. Goodrich by Brooklyn Polytechnic Institute from March 1, 1967 to February 22, 1968. The results of this work by Brooklyn Polytechnic Institute on vinyl chloride have never been published or made available.

70. On June 26, 1968, B.F. Goodrich's W.E. McCormick wrote B.F. Goodrich company physicians, enclosing a memorandum summary stating that at the request of B.F. Goodrich, the Kettering Laboratory had reproduced acroosteolysis in hamsters. B.F. Goodrich and other defendants have never produced a copy of this study, nor was it ever published. The memorandum concluded that there would be no reporting to the State of Kentucky on occupational acroosteolysis without prior consultation with the B.F. Goodrich Medical Director

in Ohio. This was done despite the Kentucky law requiring that occupational disease to be reported.

71. In February of 1969, Pantasote and the defendants listed below received a draft of a scientific publication from the University of Michigan that had been commissioned by MCA and paid for by these member defendants. The study recommended lowering exposure to vinyl chloride from 500 to 50 ppm and conducting low level monitoring. Recipients included:

- (i) Union Carbide Corporation (C.U. Dernehl, M.D.),
- (ii) Olin Mathieson Chemical Corporation (M.R. Gasque, M.D.),
- (iii) Monsanto Company (M.N. Johnson, M.D.),
- (iv) Gulf Oil Corporation (W.A. McClellan, M.D.),
- (v) Minnesota Mining and Manufacturing Company (J.A. Pendergrass),
- (vi) Uniroyal, Inc. (J.H. Wolfsie, M.D.),
- (vii) MCA (F.G. Stehenson),
- (viii) The B.F. Goodrich Company (W.E. McCormick),
- (ix) The Dow Chemical Company (T.R. Torkelson),
- (x) Air Reduction Company, Inc. (Dr. Palmer W. Townsend and Joseph A. Bourque, Jr.),
- (xi) Firestone Tire & Rubber Company (Laurence H. Ballou, M.D. and George L. Wilson),
- (xii) Atlantic Tubing & Rubber Co. (Glenn P. Smith),
- (xiii) Borden Chemical Company (Nathan M. Blackman),
- (xiv) B.F. Goodrich Chemical Company (John L. Nelson, William E. McCormick and Rex H. Wilson),
- (xv) The Dow Chemical Company (Harold L. Gordon, M.D. and Earl R. Smith),
- (xvi) Goodyear Tire & Rubber Company (C.A. Johnson, M.D. and Frank A. Cox),
- (xvii) Great American Plastics Company (Albert W. Fuhrman),
- (xviii) Gulf Oil Corporation (Howard E. Runion),
- (xix) United States Rubber Company (J.H. Wolfsie, M.D. and C.B. Westerhoff),
- (xx) Monsanto Company (William E. Nessell, M.D.),
- (xxi) The Pantasote Company (John E. Ertel),
- (xxii) Stauffer Chemical Company (Hans R. Jepsen, Jr.),
- (xxiii) MCA (F.H. Carman and F.G. Stephenson),
- (xxiv) Thompson Apex Company (Herbert Malin and Robert R. Dugan, M.D.),
- (xxv) Union Carbide Corporation (C.U. Dernehl, M.D.).

72. On March 4, 1969, B.F. Goodrich's W.E. McCormick wrote an internal "Company Confidential" memorandum to W.C. Becker, B.F. Goodrich Vice President of External Affairs, entitled "Report of Hand Disability Activities." McCormick noted that the University of Michigan's report had been distributed confidentially to the MCA Task Group for review and recommended that "(1) The association between reactor cleaning and the occurrence of AOL [Acroosteolysis] is sufficiently clear-cut that steps should be taken to minimize the exposure of workers responsible for this operation... Where it is necessary for workers to enter the reactor tanks, sufficient ventilation should be provided to reduce the vinyl chloride concentration to 50 ppm; (2) Because of increasing evidence that the disease AOL may have systemic manifestations involving bones and possibly other systems, recognized cases should be removed from further exposure and should be examined at intervals to determine whether there is any progression of the disease."

73. On April 30, 1969, the MCA Occupational Health Committee met in Washington, D.C., where its members agreed to intentionally perpetrate the fraud that exposure up to 500 PPM was safe by voting to refuse to publish the University of Michigan's report, particularly its recommendations. Instead the committee voted to accept the report for publication only if the recommendation to lower the TLV to 50 PPM was eliminated. Representing and acting officially on behalf of their employers at this meeting were:

- (i) B.F. Goodrich Company (W.E. McCormick),
- (ii) Union Carbide Corporation (C.U. Dernehl),
- (iii) Gulf Oil Corporation (W.A. McClellan, M.D.),
- (iv) Dow Chemical Company (T.R. Torkelson),
- (v) Uniroyal, Inc. (J.H. Wolfsie, M.D.),
- (vi) Manufacturing Chemists Association (F.G. Stephenson).

74. On May 6, 1969, the MCA PVC Resin Producers met in Washington, D.C. In

furtherance of their continued plan to perpetrate the fraud that VC exposure up to 500 ppm was harmless it was unanimously resolved "that the University of Michigan be permitted to publish the scientific facts developed from the study as edited by the MCA members but that the complete document now available to the OHC and the sponsoring companies not be released but be held confidential for the sponsors only." Participants at this meeting were:

- (i) Goodyear Tire & Rubber Co. (Frank A. Cox),
- (ii) Firestone Tire and Rubber Co. (Laurence H. Ballou),
- (iii) Airco Chemicals & Plastics (John T. Barr),
- (iv) The Pantasote Co. (Edwin T. Biehl, John E. Ertel, Harry A. Russell),
- (v) Diamond Shamrock Corporation (Harold E. Birr),
- (vi) Union Carbide Corporation (C.U. Demehl, M.D.),
- (vii) General Tire & Rubber Co. (M.G. Glenn, Robert W. Laundrie),
- (viii) Monsanto Company (George W. Ingle, M.N. Johnson, M.D.),
- (ix) B.F. Goodrich Chemical Company (William E. McCormick),
- (x) B.F. Goodrich Chemical Company (John L. Nelson),
- (xi) Allied Chemical Corporation (Cal Rehfuess),
- (xii) Gulf Oil Corporation (Howard E. Runion),
- (xiii) Tenneco Plastics Division (Arthur C. Siegal),
- (xiv) Union Carbide Corporation (R.N. Wheeler, Jr.),
- (xv) Uniroyal, Inc. (J.H. Wolfsie, M.D.),
- (xvi) Manufacturing Chemists Association (George E. Best, F.H. Carman).

75. On April 7, 1970, the MCA Occupational Health Committee met in New York, N.Y. and discussed the editorial changes required by the MCA committee. Thereafter, the published paper failed to contain the key information concerning the health hazards of vinyl chloride.

Representing and acting officially on behalf of their employers were:

- (i) Union Carbide (K.S. Lane),
- (ii) Gulf (W.A. McClellan, M.D. and J. Hogan, M.D.),
- (iii) Minnesota Mining and Manufacturing (J.A. Pendergrass),
- (iv) Uniroyal (J.H. Wolfsie, M.D.),
- (v) Manufacturing Chemists Association (K.D. Johnson).

Representing and acting officially on behalf of their employer but not physically present were:

- (i) Olin (Mac Roy Gasque, M.D.),
- (ii) Monsanto (M.N. Johnson, M.D.),
- (iii) B.F. Goodrich (W.E. McCormick),
- (iv) Dow Chemical (T.R. Torkelson).

76. In January of 1971 the University of Michigan published its epidemiologic study "Occupational Acroosteolysis." The report that was actually published by the University of Michigan failed to contain the 50 ppm recommendation for vinyl chloride exposure that it made in its 1969 confidential version. Furthermore, the Michigan article listed 400 ppm as the lower level of odor detection, when the 1969 report to the MCA contained a 4,100 ppm level. Workers were deliberately mislead to believe that smelling vinyl chloride meant that they were being exposed to 400 ppm instead of over 4,000 ppm. Also, the confidential 1969 report made a recommendation for low level monitoring for VCM, which was absent from the published version. These omissions were made because the defendants, as detailed above, agreed and acted collectively to keep the damaging data developed by this study from their workers, the United States Government and the general public.

77. At the Vinyl Chloride Safety Association Meeting on November 10-12, 1971, B.F. Goodrich and others present referred to acroosteolysis (AOL) as bone cancer. These same defendants who described the systemic condition as "bone cancer" when executives met among themselves, agreed that they would describe acroosteolysis in different terms in order to minimize it when speaking to their workers. They recognized that AOL is caused by repeated exposure to low concentrations of vinyl chloride (50 ppm) even though publicly and to workers they refused to admit that vinyl chloride caused AOL.

(2) Cancer Studies

78. In May of 1970, Dr. P. L. Viola, an Italian research scientist, disclosed at a conference in Houston, Texas, that animals exposed to 30,000 ppm of vinyl chloride developed cancer. Shortly thereafter, in 1971, defendants learned from the Europeans that exposures at less than 5,000 ppm also caused tumors in animals. In 1972, defendants learned from the European VC industry that vinyl chloride caused angiosarcoma of the liver in animals exposed to 250 ppm of vinyl chloride. Defendants agreed to keep secret all information about the carcinogenicity of vinyl chloride learned subsequent to the first (May 1970) report of cancer. Defendants then decided to conduct their own studies, which they would design and control, to try to refute the information they had learned from the Europeans (because they had not conducted research of their own, instead simply proclaiming that VC was safe).

79. On February 20, 1973, B.F. Goodrich's representative (W.E. McCormick) participated in a meeting of the MCA Vinyl Chloride Research Coordinators. At that meeting, it was discussed how industry could best "defocus" potential concern about cancer by performing its own study. A study proposed by Tabershaw Cooper & Associates (TCA) was specifically intended to serve as a smokescreen so the U.S. companies could show "diligence" if ever questioned about their knowledge and actions regarding vinyl chloride and cancer. In a deliberate effort to conceal its knowledge and concern about cancer, Pantasote and the defendants issued a press release concerning the study where the word "cancer" was not mentioned. Present at this meeting were: T.R. Torkelson, Dow Chemical; Z.G. Bell, Jr., PPG; K.D. Harris, Uniroyal; R.L. Maycock, B.F. Goodrich; W.E. Rinehart, Ethyl; R.N. Wheeler, Jr. Union Carbide.

80. On May 8, 1973, the MCA Board of Directors met in New York, N.Y. where they

approved the epidemiologic study explaining "the reason for moving quickly on this epidemiologic study is so that the U.S. industry must be prepared to indicate diligence and derive an appropriate handling of any problem that could arise."

81. On June 19, 1973, the MCA signed a contract with Tabershaw Cooper & Associates (TCA) to conduct a cancer epidemiology study. This was within thirty days of a planned industry meeting with NIOSH scheduled for July 17, 1973. MCA issued a press release on June 28, 1973 concerning this study. The press release on the TCA study intentionally did not contain anything to imply that the U.S. vinyl producers had any reason to be concerned with occupational cancer, and specifically deliberately directed attention away from any concern about cancer. The twenty-nine (29) companies sponsoring that study were:

- (i) Air Products,
- (ii) Allied,
- (iii) Borden,
- (iv) Certainteed,
- (v) Conoco,
- (vi) Diamond Shamrock,
- (vii) Dow Chemical,
- (viii) Ethyl,
- (ix) Exxon,
- (x) Firestone,
- (xi) Georgia Pacific,
- (xii) General Tire,
- (xiii) B.F. Goodrich,
- (xiv) Goodyear,
- (xv) W. R. Grace,
- (xvi) Great American,
- (xvii) Gulf,
- (xviii) Hooker,
- (xix) Keysor Century,
- (xx) Monsanto,
- (xxi) Olin,
- (xxii) Pantasote,
- (xxiii) PPG,
- (xxiv) RobinTech,
- (xxv) Shell,

(xxvi) Stauffer,
(xxvii) Tenneco,
(xxviii) Union Carbide,
(xxix) Uniroyal.

82. On October 15, 1973, TCA issued its second report on the epidemiology study that discussed the ways a terminated employee might be followed. Further, TCA stated that several companies had indicated that they did not wish their terminated employees to be contacted directly. This effort to hide the hazard risk from older ex-employees concealed the true extent of the cancer risk of vinyl chloride because the older retired employees were the most likely to have cancer.

83. On October 25, 1973, Zeb Bell of PPG wrote that the contractor for the epidemiologic study wanted guidance on conducting follow-up on terminated employees. He stated "I do not think we should contact the terminated, retired employees directly unless we are willing to indicate to him the reason for him being contacted...in other words, we need the information but at what risk."

84. On December 19, 1973, TCA issued its third progress report on the epidemiology study. TCA reported that the exposure level determination for the workers in the studies' cohort was not accurate. The progress report indicated that older workers most likely to have cancers from work exposures were excluded which not only concealed the cancer risk factor for those workers but also falsely minimized the cancer risk of vinyl chloride.

85. On April 15, 1974, TCA issued the first "final report" of the epidemiology study to MCA. The study reported a measurable excess of digestive cancers, especially the liver, respiratory cancers and other unspecified cancers, including brain cancers which predominated.

86. On May 3, 1974, TCA issued a second "final report" to MCA. The previous TCA

final report of April 15, 1974 was suppressed. On May 4, 1974, TCA submitted a substantially modified third "final report" as MCA requested. This was the report that MCA submitted to OSHA, containing false and misleading information that fraudulently minimized the risk of cancer.

87. On June 25 - 28, 1974 and July 8 - 11, 1974, the MCA group submitted information to OSHA. The vinyl manufacturers, coordinated by the MCA, submitted substantially false or materially incomplete evidence at the OSHA hearings on the vinyl standard.

88. On July 30, 1974, the MCA Vinyl Chloride Research Coordinators met in Washington, D.C. The group voted to abandon animal studies, which were designed to find a no effect vinyl chloride exposure level, fearing that the actual results of such studies would show that there was no safe level of exposure. It was further decided that Dr. Rinehart (Ethyl) and A. B. Linquist (Stauffer) would maintain liaison between MCA and SPI projects. Representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) PPG (Z.G. Bell, Jr.),
- (iii) Uniroyal (W.D. Harris),
- (iv) B.F. Goodrich (C.T. Disney),
- (v) Shell (H.L. Kusnetz),
- (vi) Ethyl (W.E. Rinehart),
- (vii) Air Products (W.M. Smith),
- (viii) Union Carbide (R.N. Wheeler),
- (ix) MCA staff (K.D. Johnson),

89. On September 18, 1974, the MCA Vinyl Chloride Research Coordinators met in Washington, D.C. At this meeting it was acknowledged that a significant number of Union Carbide employees at Carbide's South Charleston plant who had vinyl chloride exposure were not included in the TCA study. The intended effect was to exclude older, highly exposed

workers who were most likely to suffer from cancer. Representing and acting on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) PPG (Zeb G. Bell, Jr.),
- (iii) B.F. Goodrich (C.T. Disney, M.D.),
- (iv) Uniroyal (W.D. Harris),
- (v) Shell (R.L. Maycock),
- (vi) Air Products (Mayo Smith),
- (vii) Union Carbide (R.N. Wheeler).

Representing and acting officially on behalf of their employers, but not physically present were:

- (i) Tenneco (T.R. Aalto),
- (ii) BP Chemicals International (K.H.C. Bessant),
- (iii) Exxon (Roger E. Eckardt).

90. On August 1, 1974, industry's research contractor, TCA, published the epidemiologic study in the *Journal of Occupational Medicine*. The report that was published was based on the May 3, 1974 report. It failed to address inadequacies and deliberate inaccuracies that were used to conceal the true extent of the vinyl chloride cancer hazard.

91. On January 10, 1975, Union Carbide's R.N. Wheeler wrote MCA's Milton Freifeld concerning a decision to exclude over a thousand of the workers and most of the heavily exposed workers from the on-going study of the hazards of vinyl chloride in order to conceal the hazards of vinyl chloride.

92. On January 13, 1975, Dow Chemical's Torkelson wrote to TCA's Director of Health and Epidemiological Studies, Gaffey. At the time of the January 13, 1975 meeting, the group agreed to include only the most recently exposed of the "newly discovered records." This decision excluded the very workers from Union Carbide's facility who were most likely to

develop cancer from occupational exposure to vinyl chloride and this deliberately concealed the true extent of the carcinogenicity of vinyl chloride.

93. On May 2, 1975, Dow Chemical's (Torkelson) wrote to the members of the MCA Technical Task Group on Vinyl Chloride Research to plan how study results would be disclosed so as to minimize the hazards of vinyl chloride.

94. On May 22, 1975, the MCA Technical Panel on Vinyl Chloride Research (formerly Technical Task Group) met in Washington, D.C. The participants at this meeting discussed ways in which the study design could be altered to further conceal the hazards of vinyl chloride. Representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) Hooker (R.J. Abramowitz),
- (iii) PPG (Z.G. Bell, Jr.),
- (iv) Tenneco (H.B. Carr),
- (v) Great American (Dr. O.P. Cohen),
- (vi) Exxon (R.E. Eckardt),
- (vii) Olin (Dr. M.R. Gasque),
- (viii) B.F. Goodrich (Dr. M.N. Johnson),
- (ix) Conoco (Dr. Flynt Kennedy),
- (x) Shell (H.L. Kusnetz),
- (xi) Allied (W.C. Koch),
- (xii) General Tire (R.W. Laundrie),
- (xiii) Diamond Shamrock (J.M. Lawrence),
- (xiv) Gulf (H.N. MacFarland),
- (xv) Monsanto (W.E. Nessell),
- (xvi) Firestone (R.A. Park),
- (xvii) Ethyl (W.E. Rinchart),
- (xviii) Borden (H.L. Schmidt),
- (xix) Air Products (W.M. Smith),
- (xx) Union Carbide (R.N. Wheeler),
- (xxi) MCA staff (M. Freifeld).

Representing and acting officially on behalf of their employers but not present were:

- (i) Georgia Pacific (J.J. Davies),
- (ii) Robintech (J.E. Ertel),
- (iii) Uniroyal (Dr. W.D. Harris),

- (iv) Goodyear (Dr. C.A. Johnson),
- (v) Certaineed (W.R. Krause),
- (vi) Keysor Century (S.K. Law),
- (vii) Stauffer (A.B. Lindquist),
- (viii) British Petroleum (B.W. Duck)
- (ix) Pantasote Company (H.A. Russell).

95. On May 30, 1975, TCA submitted a supplemental "final" epidemiological report to MCA. This report showed an increased incidence of brain cancer in the exposed group. This TCA report was never published.

96. On June 3, 1975, B.F. Goodrich's W.J. Wilcox issued a strictly private interoffice memorandum regarding liver scan testing of its management employees who had received significant exposure, which was defined as having formerly received at least 3 years of exposure similar to that of a foreman operator. Wilcox instructed, "Please quietly scan [the liver of] the people in your organization." The purpose of these examinations was not disclosed to workers.

97. In September 1976, Equitable Environmental Health (EEH) (successor to TCA and subsidiary of the Equitable Assurance Society of the United States) submitted to MCA a final report on its supplementary epidemiological study of vinyl chloride workers.

98. On October 12, 1976, the MCA Vinyl Chloride Research Coordinators met in Washington, D.C. to discuss the "final" report submitted by EEH. The group recommended actions that needed to be taken, including having the project manager write to Equitable to remind them that both Torkelson and he had requested a draft of the report rather than the final version. The group recommended to the panel that this report not be accepted or distributed further until changes had been made. These actions were taken to conceal the hazards of vinyl chloride. Those representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) Uniroyal (W.D. Harris),

- (iii) B.F. Goodrich (M.N. Johnson),
- (iv) Shell (H.L. Kusnetz),
- (v) Air Products (W.M. Smith),
- (vi) Union Carbide (R.N. Wheeler),
- (vii) MCA staff (M. Freifeld),
- (viii) Ethyl (R.K. Hinderer),
- (ix) General Tire (R.W. Laundrie).

99. October 13, 1976, the MCA Technical Panel on Vinyl Chloride Research met in Washington, D.C. The panel "accepted the research coordinators' recommendation that the report not be distributed to the panel or anyone else until necessary changes were made." In the weeks to come, substantial modifications were made to the EEH report at the request of defendants. Representing and acting officially on behalf of their employers at this meeting were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) Tenneco (T.R. Aalto),
- (iii) PPG (F.C. Dehn),
- (iv) Great American (A.W. Fuhrman),
- (v) Gulf (R.L. Gibson),
- (vi) Uniroyal (W.D. Harris),
- (vii) Ethyl (R.K. Hinderer),
- (viii) Goodyear (C.A. Johnson),
- (ix) B.F. Goodrich (M.N. Johnson),
- (x) Conoco (F. Kennedy),
- (xi) Shell (H.L. Kusnetz),
- (xii) General Tire (R.W. Laundrie),
- (xiii) Firestone (R.O. Park),
- (xiv) Borden (H.L. Schmidt, Jr.),
- (xv) Air Products (W.M. Smith),
- (xvi) Union Carbide (R.N. Wheeler),
- (xvii) MCA staff (M. Freifeld).

Members representing and acting officially on behalf of their employers, but not physically present were:

- (i) Hooker (R.J. Abramowitz),
- (ii) British Petroleum (B.W. Duck),
- (iii) Exxon (R.E. Eckardt),
- (iv) Robintech (J.E. Ertel),
- (v) Allied (W.S. Ferguson),

- (vi) Olin (M.R. Gasque),
- (vii) Certainteed (J.G. Heil),
- (viii) Keysor Century (S.K. Law),
- (ix) Stauffer (A.B. Lindquist),
- (x) W. R. Grace (A.B. Magram),
- (xi) Diamond Shamrock (R.W. McBurney),
- (xii) Monsanto (G. Roush),
- (xiii) Pantasote (H.A. Russell),
- (xiv) Georgia Pacific (H.M. Zimmerman).

100. The MCA Vinyl Chloride Research Coordinators (VCRC) met on November 30, 1976 in Washington, DC and agreed that the draft of the epidemiologic study report could not be sent out until the changes deemed "necessary" by the defendants were made. The changes required by the defendants included a re-classification of the populations being studied by redefining the plants, which had the result of concealing the injuries. These post hoc changes in epidemiologic studies are simply not permitted by scientists and constitute fraud. The MCA insisted on their changes on December 13, 1976. Representing and acting officially on behalf of their employers at this meeting were:

- (i) The Dow Chemical Company (T.R. Torkelson),
- (ii) PPG Industries, Inc. (Z.G. Bell, Jr.),
- (iii) Uniroyal, Inc. (W.D. Harris),
- (iv) B.F. Goodrich Chemical Company (M.N. Johnson),
- (v) Air Products & Chemicals, Inc. (W.M. Smith),
- (vi) Union Carbide Corporation (R.N. Wheeler),
- (vii) MCA (M. Freifeld).

101. On August 18, 1977, EEH's Richard Davis wrote to MCA's J.T. Seawell. This correspondence outlined the major changes that the sponsors had dictated. Further, it was noted that MCA had a desire to submit the final report for scientific publication in the spring of 1977, and therefore, a need to expedite the work.

102. On September 8, 1977, the group of defendants that reviewed the EEH study was

aware that the study contained only five angiosarcomas even though there had been twenty-one cases reported in the United States.

103. On September 28, 1977, Dow Chemical's Torkelson wrote to the EEH with a copy to the MCA listing the four pages of changes he and the sponsors wanted in the report.

104. On October 12, 1977, EEH wrote Dow Chemical's Torkelson with a copy to MCA in which EEH stated, "we have edited the final report on the mortality study of vinyl chloride workers in line with the suggestions contained in your letter of September 28." EEH further stated that they thought that the report should then be published in final form. This letter from EEH was then sent to various sponsors by Torkelson. Torkelson then suggested that each company be prepared to vote whether to accept the report.

105. On October 20, 1977, Dr. Torkelson of Dow Chemical, acting on behalf of the MCA panel, gave approval for limited distribution of the study contingent upon changes being made as demanded by the MCA.

106. On January 1, 1978, EEH submitted another "final" report to MCA. The MCA then circulated the report to the MCA Vinyl Chloride Research Coordinators and Technical Panel on February 14, 1978. It was specifically stated "all sponsoring companies should take necessary action to ensure that distribution of all previous 'draft final' and products report to be terminated immediately as all reports issued to date are now rendered obsolete by the enclosed document dated January, 1978."

107. On January 3, 1978, the Vinyl Chloride Safety Association met in Valley Forge, Pennsylvania. At this meeting, it was noted that target organs for vinyl chloride are the linings of the small blood vessels and not just specific sites such as the liver and the brain. Representing

and acting officially on behalf of their employers at this meeting were:

- (i) Diamond Shamrock (R.W. McBurney, M.D. and J. VanWinkle),
- (ii) Georgia Pacific (H. Lloyd),
- (iii) B.F. Goodrich (H. Waltemate),
- (iv) Tenneco (D. Rhodes),
- (v) Air Products (J.T. Barr),
- (vi) Stauffer (R. Wilson),
- (vii) Goodyear (A. Dixon),
- (viii) PPG (R.E. Stack).

108. On January 6, 1978, MCA's J.T. Seawell, the MCA vinyl chloride coordinator, wrote the Vinyl Chloride Research Coordinators and Technical Panel on Vinyl Chloride Research and noted that Dow Chemical's Torkelson rewrote entire sections of the EEII report, including the discussion and the conclusion. The purpose, and effect, of the rewrite was to conceal and minimize the hazards of vinyl chloride.

109. On March 5, 1979, SPI's John R. Lawrence circulated to the PVC Safety Group a copy of Dow Chemical's position paper concerning recently discovered brain tumors, which was for internal use only and not disclosed to workers.

110. On March 5, 1979, Union Carbide's R. N. Wheeler wrote John Stafford, Division Manager for Health and Environmental Protection at ICI about the *Houston Post's* report of brain cancer in Union Carbide's Texas City plant. Mr. Wheeler stated "the lack of any apparent commonality among the cases and the governmental desire to widely publicize any problem leaves us with no choice but to launch intensive epidemiological studies at both locations in an effort to learn the cause." He was talking about both the Union Carbide Texas City plant and its South Charleston plant. The industry had not made the United States Government aware of excess brain cancers at all the other facilities where vinyl chloride was present such as Olin Assonet, and South Charleston.

111. On March 21, 1979, the MCA Vinyl Chloride Research Coordinators met in Washington, D.C. where they recognized that none of the ten brain cancers from Union Carbide's Texas City plant were included in the EEH study. At this meeting, Torkelson presented work from Maltoni in which Maltoni had found brain cancer in animals exposed to vinyl chloride. Additionally, the audit of IBT was discussed. Dr. Busey, with Experimental Pathology Laboratories, stated that the evidence acquired to date led to the conclusion that an excessive number of animals were thrown away and that there was no apparent attempt made to salvage tissues critical to the investigation. This was done to prevent detection of the cancer in the animals. The actions addressed in this meeting were among the continuing affirmative acts defendants committed to misrepresent and conceal the fact that exposure to VC caused brain cancer. Representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) PPG (Z.G. Bell),
- (iii) Ethyl (T.J. Beyna),
- (iv) Uniroyal (W.D. Harris),
- (v) Air Products (C.A. Heiberger),
- (vi) B.F. Goodrich (M.N. Johnson),
- (vii) Shell (C.D. Kary),
- (viii) Union Carbide (R.N. Wheeler),
- (ix) MCA staff (J.T. Seawell).

Also acting in their official capacity on behalf of their employers and with the consent of their employers and the rest of the group were:

- (i) W. Buscy, Diamond Shamrock (G.K. Hatfield),
- (ii) Union Carbide (H.M.D. Utidjian),
- (iii) ICI (J. Stafford).

112. On September 20, 1979, the CMA Vinyl Chloride Research Coordinators met in Washington, D.C. and were given a verbal report of a highly confidential study conducted in

England by the Institute for Occupational Medicine on PVC workers at a risk for lung problems equivalent to twenty cigarettes per day. Although the Toxic Substance Control Act ("TSCA") Sec. 8(e) requires the reporting of substantially significant adverse health effects, this group failed to pass on the information it received concerning the lung problems. The group also voted that there would be neither additional retrospective auditing nor any effort to summarize the IBT data at that time, the effect of which would be to further conceal the cancers. R. N. Wheeler gave a report on the Texas City brain cancer problem. As it related to brain cancer, Dr. Tamburro (of the University of Louisville) on behalf of defendant B.F. Goodrich reported to Dr. Torkelson that the University of Louisville was not studying brain cancer and did not anticipate studying brain cancer. Members representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) Ethyl (T.J. Benya),
- (iii) PPG (Z.G. Bell, Jr.),
- (iv) Uniroyal (W.D. Harris),
- (v) B.F. Goodrich (M.N. Johnson),
- (vi) Union Carbide (R.N. Wheeler),
- (vii) CMA staff (J.T. Seawell).

Also acting in their official capacity on behalf of their employers and with the consent of their employers and the rest of the group were:

- (i) Shell (V.L. Kirkland),
- (ii) Diamond Shamrock (G.K. Hatfield).

Members representing and acting officially on behalf of their employers but not physically present were:

- (i) Air Products (W.M. Smith).

113. On March 4, 1980, the CMA Vinyl Chloride Project Panel and Research

Coordinators met in Washington, D.C. and discussed the January 15, 1980 letter from EEII concerning their study and particularly the excess brain cancer cases in PVC workers. The participants agreed that if the study were carried out the group would further confirm that brain cancer was caused by vinyl chloride exposure. The participants discussed methods in which the study could be altered to conceal the excess brain cancers found in workers exposed to vinyl chloride. Representing and acting officially on behalf of their employers at this meeting were:

- (i) Firestone Plastics Co. (R.A. Park),
- (ii) Continental Oil Co. (B. Braddle),
- (iii) Hooker Chemicals & Plastics (R.J. Abramowitz),
- (iv) Georgia-Pacific Corp. (J.F. Gabbett),
- (v) Great American Chemical Corp. (P. Cohen),
- (vi) Uniroyal (W.D. Harris).

114. On September 17, 1980, the CMA Vinyl Chloride Research Coordinators met in Washington, D.C. The EIIA had evaluated the validity of the underlying database of workers exposed to vinyl chloride and had reported to defendants that the integrity of the underlying database was poor. Despite the receipt of a report that detailed the inadequacy of the database, the vinyl panel refused to allow EHA to correct even the most egregious errors in the underlying database, including deficiencies in over 3,000 records that EHA reported had rendered the records not usable. Instead of attempting to remedy the defects in the data, the panel insisted that EIIA analyze the deficient data in its unacceptable and unreliable state. Members representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) PPG (Z.G. Bell),
- (iii) Uniroyal (W.D. Harris),
- (iv) B.F. Goodrich (M.N. Johnson),
- (v) Shell (D.L. Kirkland),
- (vi) Union Carbide (R.N. Wheeler),
- (vii) Air Products (W.M. Smith),
- (viii) CMA staff (C.R. Stack).

Members representing and acting officially on behalf of their employers but not physically present were:

- (i) Ethyl (T.J. Beyna).

115. On September 26, 1980, PPG's Zeb Bell wrote an internal memo to F. C. Dchn, Director of Environmental Affairs at PPG, discussing the finding of higher than normal brain tumors in the original study. The author recommended that the study should only be continued "if we can gain information to help in future lawsuits."

116. On November 14, 1980, the CMA vinyl chloride industry representatives met in Pittsburgh, Pennsylvania. After discussing the need to correct the flaws in the unreliable database they decided that the "original cohort" should be left "as is" despite their knowledge that these misrepresentations were fraudulent. Representing and acting officially on behalf of their employers were:

- (i) Ethyl (Theodore J. Beyna),
- (ii) Stauffer (Robert W. Lally),
- (iii) Union Carbide (R.N. Wheeler, Jr.),
- (iv) Conoco (Tom Grumbles),
- (v) Diamond Shamrock (Jack E. Zimmerman),
- (vi) Uniroyal (Benton R. Leach),
- (vii) Hooker (Ray J. Abramowitz),
- (viii) Certainteed (H. William Blakesley),
- (ix) B.F. Goodrich (Maurice N. Johnson),
- (x) Goodyear (C.A. Johnson),
- (xi) Dow Chemical (Theodore R. Torkelson),
- (xii) PPG (Zeb G. Bell, Jr.),
- (xiii) General Tire (Robert W. Laundrie),
- (xiv) Shell (V.L. Kirkland and R.T. Keefe),
- (xv) Gulf (C.P. Wen),
- (xvi) Monsanto (William R. Gaffey),
- (xvii) Firestone (W.F. Carroll, Jr.),
- (xviii) CMA staff (Carol R. Stack).

117. In October 1981, at the direction of defendants and acting through the MCA Vinyl Panel, industry contractor Clark Cooper published *Epidemiologic Study of Vinyl Chloride Workers: Mortality through December 31, 1972*, which, at the direction of defendants, concealed and failed to reveal excess cancers and particularly brain cancers.

118. On May 26, 1982, the CMA Vinyl Chloride Research Coordinators met in Washington, D.C. The group acknowledged that they were not going forward with a case control study of brain cancer. The group was advised that the brain cancer control study would show that brain cancers were caused by vinyl chloride exposure and therefore, for litigation purposes, it was best not to carry out the planned study. Members representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) Monsanto (William Gaffey),
- (iii) B.F. Goodrich (Maurice Johnson),
- (iv) General Tire (Robert Landrieu),
- (v) Hooker (Mitchell Zavon),
- (vi) CMA staff (Carol Stack).

Also acting in their official capacity on behalf of their employers and with the consent of their employers and the rest of the group was Otto Wong of Environmental Health Associates. Representing and acting officially on behalf of their employers but not physically present were:

- (i) Union Carbide (Susan Austin and R.N. Wheeler),
- (ii) Ethyl (Ted Benya),
- (iii) Gulf (C. Pang Wen).

119. On September 30, 1983, the CMA Vinyl Chloride Research Coordinators met in Washington, D.C. Prior to this meeting, the sponsors of the EHA study reclassified as exposed or not exposed, some of the workers that were involved in the previous study. In particular, a number of individuals (approximately 800) were now reclassified as not having been exposed to

vinyl chloride although this information was not verified. This resulted in the sponsors contracting and paying for the publication of a study in which they had excluded persons from the study by reclassifying them as not exposed without obtaining appropriate data or information, thus intentionally skewing the results. Representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (Ted Torkelson),
- (ii) General Tire (Robert Laundrie),
- (iii) Occidental (Mitchell R. Zavon),
- (iv) B.F. Goodrich (Maurice N. Johnson),
- (v) Gulf (S.P. Tsai),
- (vi) Monsanto (William Gaffey),
- (vii) Union Carbide (Howard Greenberg),
- (viii) EHA (Otto Wong),
- (ix) CMA staff (Carol Stack).

120. On August 15, 1986, the CMA's Manager of the Vinyl Chloride Panel, Has Shah, sent a draft of the EHA report by Wong to the Vinyl Chloride Panel. On September 8, 1986, the CMA Vinyl Chloride Panel met in Oakland, California and agreed that EHA would need to revise the draft report based on the comments received by the CMA Vinyl Panel. On October 16, 1986, EHA's Dr. Wong wrote Has Shah of CMA that he was submitting the final report. He stated that, "comments from CMA on the draft report have been carefully considered in revising the report." The group met with EHA. Representing and acting officially on behalf of their employers were:

- (i) Monsanto (William Gaffey),
- (ii) Shell Oil (Sally Cowles),
- (iii) EHA (Donald Whorton and Otto Wong),
- (iv) CMA (Has Shah).

121. On April 13, 1987, Dr. Doll submitted "*The Effects of Exposure to Vinyl Chloride, an Assessment of the Evidence.*" This analysis was based upon false information provided to Dr.

Doll by CMA, particularly with regard to representations by the defendants that their cancer studies were comprehensive and valid. CMA intentionally misinformed Doll that the Wong study was a comprehensive and valid study and included all prior cohorts.

122. On April 21, 1987, CMA's Has Shah wrote to the Vinyl Chloride Panel members. Shah wrote about the courses of action the panel could take in an effort to minimize the reports of cancer from the EHA report. EHA had identified 37 deaths from liver and biliary cancers. Shah noted that only 15 of these 37 were angiosarcomas. Has Shah stated that there were two plausible explanations for this finding: (1) that vinyl chloride caused liver and biliary cancers other than angiosarcoma or (2), the deaths were actually misdiagnosed angiosarcomas. In response to a proposal for further study the group agreed that there would be "no talking to decedent's families" to get accurate information.

123. On July 13, 1987, defendant PPG reported that medical examinations of its workers exposed to vinyl chloride "makes the most incriminating and most costly course of action in cases of abnormality" and "does not allow medical judgment but instead plays a numbers game." This information was concealed from the injured workers so that their health was not protected and therefore they would not learn about their injuries.

124. On October 20, 1987, ICT's Paddle wrote Dr. Doll enclosing correspondence dated October 9, 1987, noting that one third of the North American angiosarcomas in the angiosarcoma registry did not appear in Dr. Wong's paper. In addition, one third of the North American angiosarcomas identified in Dr. Wong's paper were not present in Dr. Doll's submission. These irregularities served to minimize the disclosure of toxicity of vinyl chloride.

125. On March 2, 1988, ICT's Bennett wrote to Dr. Doll. Bennett stated there was no

need to acknowledge any person or company as having helped in the vinyl chloride review because further study would be done solely to defend against litigation.

126. On May 8, 1989, SPI and the Vinyl Institute Health Safety and Environmental Committee met at Pine Mountain, Georgia. The following persons participated on behalf of their employers in agreeing to terminate the angiosarcoma registry in order to conceal the fact that vinyl chloride was causing angiosarcoma in PVC fabricators:

- (i) B.F. Goodrich (W.C. Holbrook),
- (ii) B.F. Goodrich (Woody Ban),
- (iii) Georgia Gulf Corporation (Frank E. Borrelli),
- (iv) Vista Chemical Company (David Cohen),
- (v) CertainTeed Corporation (C.A. Gellner),
- (vi) Georgia Gulf Corporation (Beverly B. Gholson),
- (vii) Occident Chemical (Don Goodman),
- (viii) PPG Industries, Inc. (Clark Graybill),
- (ix) Occident Chemical Corporation (James W. Kachtick),
- (x) FMC Corporation (Jeffrey Klein),
- (xi) Vista Chemical Company (Joseph C. Ledvina),
- (xii) Borden Chemicals & Plastics (Cris Lunn),
- (xiii) Occident Chemical (Robert D. Luss),
- (xiv) PPG Industries, Inc. (Donna Magill),
- (xv) PPG Industries, Inc. (Don Pearson),
- (xvi) European Vinyls Corporation (Willem Prinselaar),
- (xvii) European Council of Vinyl Manu. (Nancy Russotto),
- (xviii) Shintech, Inc. (E.E. Schroeder),
- (xix) Air Products & Chemicals, Inc. (Paul Usinowicz),
- (xx) B.F. Goodrich Canada (Mike Voisin).

C: Agreement to enter into a secrecy pact regarding their knowledge of the carcinogenicity of VC.

127. On September 11, 1970, the MCA Occupational Health Committee met in Montreal, Canada to address the European researcher P.L. Viola's recent animal study findings of cancer. Meeting attendees agreed this affected both VCM and PVC producers. Representing and acting in their official capacity on behalf of their employers were:

- (i) B.F. Goodrich (W.E. McCormick),

- (ii) Olin (M.R. Gasque, M.D.),
- (iii) Gulf (J.J. Hogan, M.D.),
- (iv) Monsanto (M.N. Johnson, M.D.),
- (v) Union Carbide (K.S. Lane, M.D.),
- (vi) Minnesota Mining and Manufacturing (J.A. Pendergrass),
- (vii) Dow Chemical (T.R. Torkelson),
- (viii) Uniroyal (J.H. Wolfsie, M.D.),
- (ix) MCA (K.D. Johnson),
- (x) PPG (L.B. Grant, M.D.).

128. MCA members recognized that Dr. Viola's work produced cancer tumors from exposures below 5,000 ppm, leading to the conclusion that 100 ppm would not prevent tumors. Defendants agreed to fraudulently conceal this vinyl chloride danger and give no warnings to workers, including plaintiff's decedent.

129. On November 16, 1971, the MCA held a vinyl chloride conference in Washington, D.C., where participants noted that publication of Dr. Viola's work finding cancer in vinyl chloride-exposed animals could cause serious problems for the U.S. industry and that publication of the information should be suppressed. Representing and acting officially on behalf of their employers were:

- (i) B.F. Goodrich (W.E. McCormick),
- (ii) Stauffer (M.V. Anthony),
- (iii) PPG (Z.G. Bell),
- (iv) Allied (J.C. Fedoruk),
- (v) Pantasote (J.P. Gabbett),
- (vi) Monsanto (M.N. Johnson),
- (vii) MCA (K.D. Johnson),
- (viii) Solvay American (R.W. Knoepful),
- (ix) Firestone (W.W. Madden),
- (x) General Tire and Rubber (J.R. Mudd),
- (xi) Conoco (S.F. Pitts),
- (xii) Tenneco (A.C. Siegel),
- (xiii) Allied (K.K. Sheth),
- (xiv) Air Products (W.M. Smith),
- (xv) Dow Chemical (T.R. Torkelson),
- (xvi) Union Carbide (R.N. Wheeler),
- (xvii) Shell (N.G. White).

130. On November 23, 1971, Union Carbide's R. N. Wheeler wrote a trip report of his attendance at the November 16, 1971 MCA Vinyl Chloride Conference. He reported that Dr. Viola had found tumors at exposures of less than 5,000 parts per million. Industry representative specifically recognized that publishing Dr. Viola's work in the U.S. could lead to serious problems with regard to the vinyl chloride monomer and resin industry so they agreed to keep the information secret.

131. The defendants recognized that they needed access to the European cancer research, but agreed that it should be kept secret and not disclosed to anyone beyond the MCA Vinyl Chloride Task Group. MCA then began to negotiate a secrecy agreement with the European VC companies.

132. On August 16, 1972, D. M. Powell, on behalf of the European vinyl chloride industry, wrote to MCA's G.E. Best and noted that they had worked out the terms of a secrecy agreement to hold confidential European data regarding carcinogenicity of vinyl chloride.

133. On October 19, 1972, MCA's Kenneth Johnson wrote to defendants about the secrecy agreement with European researchers. Mr. Johnson stated that the members of the MCA's task group were the only ones entitled to receive information about the secret European project. The Agreement provided that the signatories would be entitled to receive information about cancers caused by vinyl chloride, but they could not disclose this information without the European's written consent. The members whose companies had signed the secrecy agreement were:

- (i) Mayo Smith (Air Products),
- (ii) W.A. Knapp (Allied),
- (iii) Henry Schmidt (Borden),
- (iv) Flynt Kennedy (Conoco),

- (v) Ted Torkelson (Dow Chemical),
- (vi) Bill Rinehart (Ethyl),
- (vii) W.W. Madden (Firestone),
- (viii) W.E. McCormick (B.F. Goodrich),
- (ix) Elmer Wheeler (Monsanto),
- (x) Roy Gasque (Olin),
- (xi) Zeb Bell (PPG),
- (xii) R.W. Maycock (Shell),
- (xiii) N.V. Hendricks (Standard Oil New Jersey),
- (xiv) A.B. Linquist (Stauffer Chemical),
- (xv) Marvin Rosen (Tenneco Chemicals, Inc.),
- (xvi) R. N. Wheeler (Union Carbide),
- (xvii) Walter Harris (Uniroyal).

134. In approximately November of 1972, B.F. Goodrich signed the secrecy agreement pledging to hold secret the results of a secret European animal study that found cancer from vinyl chloride exposure. As a result of this agreement, B.F. Goodrich became aware of more research data that clearly showed that vinyl chloride causes angiosarcoma of the liver, a rare form of liver cancer, in animals exposed to less than occupational levels. By this time, B.F. Goodrich already had employees who were diagnosed with this cancer. B.F. Goodrich management continued to conceal the relationship between vinyl chloride and angiosarcoma of the liver from local plant doctors, its employees and employees of its customers.

135. On November 14, 1972, the MCA Technical Task Group on Vinyl Chloride Research met in Washington, D.C. and members were given the secret European information that VCM caused angiosarcoma of the liver in animals exposed to 250 ppm. Members representing and acting officially on behalf of their employers were:

- (i) Air Products (W. Mayo Smith),
- (ii) Allied (W.A. Knapp),
- (iii) Borden (H.L. Schmidt, Jr.),
- (iv) Conoco (Flynt Kennedy),
- (v) Dow Chemical (T.R. Torkelson and C. Otis),
- (vi) Ethyl (W.E. Rinehart),
- (vii) B.F. Goodrich (W.E. McCormick),

- (viii) PPG (Z.G. Bell, Jr.),
- (ix) Shell (R.L. Maycock),
- (x) Stauffer (M.V. Anthony),
- (xi) Tenneco (A. Siegel),
- (xii) Union Carbide (R.N. Wheeler),
- (xiii) Uniroyal (W.D. Harris),
- (xiv) MCA (G.E. Best and K.D. Johnson),
- (xv) Representative from ICI (D.M. Elliott).

Members representing and acting officially on behalf of their employer, but not physically present were:

- (i) Exxon (N.V. Hendricks),
- (ii) Firestone (W.M. Madden),
- (iii) Monsanto (E.P. Wheeler),
- (iv) Olin (M.R. Gasque).

136. On January 4, 1973, Dow Chemical, at a time when executives at Dow knew of animal studies showing that vinyl chloride caused cancer in animals, issued its own Material Safety Data Sheet (MSDS) on vinyl chloride. Dow Chemical failed to mention that vinyl chloride had been shown to cause cancer in animals. To the contrary, it simply referenced "dizziness and drunkenness, possibly lung irritation ... anesthetic effect." Dow Chemical's Torkelson, represented by counsel, admitted in sworn deposition testimony that Dow Chemical knew of the European cancer studies at the time it issued its MSDS that did not disclose a risk of cancer.

137. On January 30, 1973, the federal government formally requested the submission of unpublished information regarding vinyl chloride hazards. Defendants refused to provide responsive information and plotted on how best to deceive the federal government and not reveal the secret European information.

138. On January 30, 1973, the MCA Vinyl Chloride Research Coordinators met in

Washington, D.C. where Dr. Torkelson of Dow Chemical, who had previously been dispatched to Europe to view the European studies, reported that the European research that found that vinyl chloride caused cancer was of high quality and that the results were undeniable. Immediately thereafter, in a press release regarding vinyl chloride issued by MCA, the companies deliberately refused to mention the subject of cancer. In addition, at the same meeting, it was recognized that vinyl chloride was a component of aerosols, but that industry could not stop selling vinyl chloride for aerosol use without risking disclosure of the cancer problem. The group specifically recognized that aerosols could result in unlimited liability to the U.S. population while liability to workers would be limited by Workman's Compensation. Members representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) PPG (Z.G. Bell, Jr.),
- (iii) Uniroyal (W.D. Harris),
- (iv) Shell (R.L. Maycock),
- (v) B.F. Goodrich (W.E. McCormick),
- (vi) Ethyl (W.E. Rinehart),
- (vii) Carbide (R.N. Wheeler, Jr.),
- (viii) ICI (D.P. Duffield),
- (ix) Exxon (N.V. Hendricks),
- (x) Goodyear (C.A. Johnson, M.D.),
- (xi) MCA staff member (G.E. Best).

139. On February 1, 1973, B.F. Goodrich's W.E. McCormick wrote Anton Vittone with copies to J.W. Miller, Jr., Vice President of B.F. Goodrich, Dr. R.W. Strassburg, Dr. Rex H. Wilson, B.F. Goodrich Medical Director and Benjamin M. G. Zwicker, B.F. Goodrich Director. McCormick said "I am convinced that if the present European information becomes known to governmental agencies in the United States, and particularly to OCAW, URW and the [illegible] vinyl chloride will be classed as a carcinogen."

140. Despite the above, on February 28, 1973, after learning that ACGIH intended to lower the TLV for vinyl chloride, B.F. Goodrich's W.E. McCormick, in furtherance of their underlying fraudulent behavior, wrote an internal memorandum to D.L. Dowell, B.F. Goodrich's Manager of Safety. Mr. McCormick stated "the present OSHA level is 500 ppm (ceiling). Regardless of what ACGIH does, we should go with the OSHA level." At this time, B.F. Goodrich already had the secret European data showing cancer in animals exposed to vinyl chloride at 250 ppm. B.F. Goodrich withheld this information from OSHA, its workers, its customers and their employees, including plaintiff's decedent.

141. Prior to March 5, 1973, each of the following had signed the secrecy agreement requiring them not to disclose the carcinogenicity of vinyl chloride:

- (i) Air Products,
- (ii) Allied Chemical,
- (iii) Borden Chemical,
- (iv) Conoco,
- (v) Diamond,
- (vi) Dow Chemical,
- (vii) Ethyl,
- (viii) Exxon,
- (ix) Firestone,
- (x) B.F. Goodrich,
- (xi) Goodyear,
- (xii) Monsanto,
- (xiii) Olin,
- (xiv) PPG,
- (xv) Shell,
- (xvi) Stauffer,
- (xvii) Tenneco,
- (xviii) Union Carbide
- (xix) Uniroyal.

142. On May 21, 1973, B.F. Goodrich and other members of the MCA Vinyl Chloride Research Coordinators met to discuss their obligations under the secrecy agreement. They

admitted that the actions of MCA they had authorized could be construed as an illegal conspiracy among industry if information were not made public or at least made available to the government. Nonetheless, the information about vinyl chloride causing cancer continued to be fraudulently concealed. Representing and acting officially on behalf of their employers were:

- (i) Dow Chemical Company (T.R. Torkelson),
- (ii) Tenneco Chemicals, Inc. (T.R. Aalto),
- (iii) PPG Industries (Z.G. Bell, Jr.),
- (iv) Stauffer Chemical Company (F.J. Doyle),
- (v) B.F. Goodrich (M.N. Johnson, M.D.),
- (vi) Continental Oil Company (Flynt Kennedy),
- (vii) Allied Chemical (W.A. Knapp),
- (viii) Diamond Shamrock (R.W. McBurney, M.D.),
- (ix) Firestone Plastics (W.W. Madden),
- (x) Shell Chemical (R.L. Maycock),
- (xi) Ethyl Corporation (W.E. Rinehart),
- (xii) Air Products & Chemicals (W.M. Smith),
- (xiii) Union Carbide (R.N. Wheeler),
- (xiv) MCA (B.M. Barackman, esq., A.C. Clark, K.D. Johnson).

143. On July 17, 1973, the vinyl chloride manufacturers listed below met with NIOSH's Director, Marcus Key. Prior to the meeting the defendants agreed not to disclose their knowledge of the carcinogenicity of vinyl chloride as demonstrated in the European research. At the meeting, defendants presented SD-56 as representing the position of MCA and its members regarding the hazards of vinyl chloride, despite their knowledge that vinyl chloride was substantially more hazardous than the information defendants intentionally included in SD-56. They did not disclose the vinyl chloride cancer information they had obtained under the secrecy agreement.

- (i) Ethyl (Dr. W.E. Rinehart),
- (ii) Dow Chemical Chemical (V.K. Rowe),
- (iii) Union Carbide (R.N. Wheeler),
- (iv) MCA (George E. Best).

144. On December 13, 1973, Dow Chemical's D.A. Raush wrote to a Dow Chemical scientist that he approved the release of a paper concerning the effect of exposure of rats to vinyl chloride except that "all references to Dr. Maltoni's work and its findings of carcinogenicity and his results should be deleted" and "release of data is to be limited to those companies supporting the MCA studies on vinyl chloride." In addition, the information was to be marked "Dow confidential."

145. On January 23, 1974, B.F. Goodrich issued a press release about the deaths of three employees in its polyvinyl chloride operations at Louisville who died of angiosarcoma. The press release did not mention the Maltoni data that defendants had fraudulently concealed and which had shown this very type of cancer in animals exposed to vinyl chloride back in November 1972.

146. On February 15, 1974, OSHA held an informal hearing in which B.F. Goodrich's Anton Vittone was called to testify. Mr. Vittone falsely represented that Viola's work had demonstrated cancers at 30,000 ppm when B.F. Goodrich was well aware that tumors were found at levels less than 5,000 ppm. Vittone failed to mention that B.F. Goodrich had received secret information concerning the relationship between vinyl chloride and angiosarcoma of the liver in November of 1972, or any of the earlier information that B.F. Goodrich had collected about vinyl chloride causing liver damage. Additionally, representatives of defendant MCA admitted that the MCA produced SD-56 for its members to represent warnings to all users of vinyl chloride, including plaintiff's decedent.

147. On March 1, 1974, Dr. Maltoni finally published his findings on vinyl chloride and animal testing and revealed his study findings, which demonstrated that vinyl chloride was

capable of causing various types of cancer in animals including angiosarcomas. This information had been kept secret since November of 1972.

148. On March 16, 1974, Dr. Creech, the local B.F. Goodrich Louisville plant physician, and Dr. Maurice Johnson, Corporate Medical Director of B.F. Goodrich, published a case report on angiosarcoma in the Journal of Occupational Medicine. The article contained an editor's note concerning Maltoni telling OSHA about his finding in 1972 of angiosarcoma of the liver in animals exposed to vinyl chloride. Dr. Creech, B.F. Goodrich's Louisville plant physician, first learned of Maltoni's work when he read the editor's note that had been added to his 1974 article. Although Dr. Creech had been charged with protecting workers at the B.F. Goodrich's Louisville facility, Dr. Creech was not told in November of 1972 of Maltoni's findings. Dr. Creech said he had previously diagnosed angiosarcoma in a B.F. Goodrich worker exposed to vinyl chloride, but he did not have any reason to suspect that it had been caused by vinyl chloride. Clearly B.F. Goodrich intentionally hid from its own local physicians charged with the care of its workers, the information that vinyl chloride had long been linked to angiosarcoma of the liver.

149. On June 5, 1974, industry members met with the European scientist Cesare Maltoni (University Bologna) in New York, N.Y. The meeting was highly confidential and personal and no notes or memos were allowed. The group learned of Maltoni's findings of injuries and tumors at 50 ppm. Present at this meeting were:

- (i) Ethyl (Jim Bergan, Bill Rinehart, Mr. Sobel, Roy Wilkins and M.R. Zavan),
- (ii) B.F. Goodrich (Maurice Johnson),
- (iii) Dow Chemical (Ted Torkelson),
- (iv) Union Carbide (Kenneth S. Lane),
- (v) Uniroyal (Walt Harris),
- (vi) Air Products (Mayo Smith),
- (vii) Shell (Howard Kusnetz),
- (viii) Solvay (Auguste Gosselin).

150. On December 12, 1974, the MCA Technical Task Group on Vinyl Chloride Research met in Washington, D.C. At this meeting, the status of the European secrecy agreement was discussed. It was specifically noted that the agreement remained in effect. Representing and acting officially on behalf of their employers were:

- (i) Dow Chemical (T.R. Torkelson),
- (ii) Hooker (R.J. Abramowitz),
- (iii) Georgia Pacific (P.L. Armstrong),
- (iv) PPG (Z.G. Bell, Jr.),
- (v) Firestone (R.S. Brookman),
- (vi) Exxon (R.E. Exkardt, M.D.),
- (vii) Allied (W.S. Ferguson),
- (viii) Great American (A.W. Fuhrman),
- (ix) Uniroyal (W.D. Harris),
- (x) B.F. Goodrich (M.N. Johnson, M.D.),
- (xi) Conoco (Flynt Kennedy),
- (xii) Diamond Shamrock (Albert Kover),
- (xiii) Shell (H.L. Kusnetz),
- (xiv) Goodyear (C.A. Johnson, M.D.),
- (xv) Ethyl (W.E. Rinehart),
- (xvi) Borden (H.L. Schmidt, Jr.),
- (xvii) Tenneco (David Smalley),
- (xviii) Air Products (W.M. Smith),
- (xix) Union Carbide (R.N. Wheeler),
- (xx) MCA staff (Milton Freifeld, K.D. Johnson and Samuel Watts), among others.

151. On January 5, 1980, CMA's J.T. Seawell wrote the Vinyl Chloride Project Panel and Vinyl Chloride Research Coordinators attaching an excerpt from the *Federal Register* dated December 18, 1979 in which OSHA requested additional information for a reassessment of the known health effects of vinyl chloride. Mr. Seawell stated that CMA planned to resubmit all research reports that were previously submitted to pertinent government agencies immediately after their acceptance by the Vinyl Chloride Research Coordinators and the Vinyl Chloride Panel. CMA together with its members affirmatively agreed to withhold information that it had

previously concealed.

D: Agreement to fraudulently misrepresent the "odor threshold" of vinyl chloride in order to misrepresent exposures to vinyl chloride.

152. The "odor threshold" is the concentration or level of exposure at which a human can smell a chemical. The defendants have made false and contradictory statements to continuously mislead workers into believing they faced no toxic hazard from vinyl chloride.

153. Prior to the early 1970's when the workers were being told that they were free from hazard because the safe level of exposure to vinyl chloride was 500 ppm, the workers were also told that the odor threshold was at 250 ppm and the fact that they smelled VC was no indication of danger. In later years, when some of the hazards of vinyl chloride were revealed, the employers told their workers that the cancer risk had been eliminated from the workplace because the cancers were caused by past exposures that were very high.

154. Pantasote and the defendants repeatedly informed workers and published documents stating that the odor threshold for vinyl chloride was approximately 250 ppm. Thus, if a worker smelled vinyl chloride, the worker would believe that the exposure was below the 500 ppm TLV.

155. Pantasote and defendant Gencorp repeatedly informed plaintiff's decedent during the course of his employment prior to 1975 that the odor threshold for vinyl chloride was approximately 250 ppm.

156. In a June 21, 1968 B.F. Goodrich memorandum to Fred Krause, J.G. DiSalvo acknowledged that the odor threshold for vinyl chloride was 4,100 ppm.

157. When B.F. Goodrich finally conducted its own test for the vinyl chloride odor threshold in 1974, the lowest level at which the most sensitive subject could detect the vinyl

chloride was 2,000 ppm.

158. Yet, as late as April 1, 1975, a B.F. Goodrich memorandum still informed workers that the odor threshold was 260 ppm at the Avon Lake plant. This same information was provided to workers at the Point Pleasant plant where plaintiff's decedent worked, thereby fraudulently concealing the truth.

CAUSES OF ACTION

COUNT I

Employer Intentional Tort Claim Against Pantasote and Defendant Gencorp

159. Plaintiff incorporates by reference all of the allegations of this pleading as if fully rewritten here.

160. Pantasote and defendant Gencorp, plaintiff's decedent's employers, conducted large-scale manufacturing and production activity at their Point Pleasant, West Virginia plant including various operations utilizing significant amounts of vinyl chloride.

161. Pantasote and defendant Gencorp required plaintiff's decedent to work with and to be exposed to vinyl chloride throughout the course of his employment.

162. At all times relevant to this Complaint, Pantasote and Gencorp possessed medical and scientific data, along with other knowledge, which clearly established that vinyl chloride was hazardous to the health and safety of its employees, including Henry Clay Roney, who were required to work with and around these chemicals.

163. Pantasote and defendant Gencorp had knowledge of the following facts while plaintiff's decedent was exposed to vinyl chloride at the Point Pleasant, West Virginia plant:

- a. That Pantasote and defendant Gencorp did not know what the safe exposure limit was until established by the OSHA in 1975, yet told workers that 500

ppm was a safe exposure limit with a significant margin of safety;

- b. That from the earliest test data in the 1930's and subsequent data in the 1940's and 1950's, vinyl chloride caused damage to the liver;
- c. That vinyl chloride is a hepatotoxin;
- d. That vinyl chloride is a carcinogen which is capable of causing different types of cancer at different sites of the human body;
- e. That the 500 ppm exposure limit Pantasote and defendant Gencorp applied to the plant where the plaintiff's decedent worked had not been proven to be safe;
- f. That no safe exposure limit had been established by scientific testing at any time prior to 1974;
- g. That Pantasote and defendant Gencorp did not know or monitor what plaintiff's decedents' exposures were at any time prior to 1974;
- h. That vinyl chloride workers were substantially certain to contract cancers such as those demonstrated to have occurred in secret animal studies;
- i. That the multi-potential carcinogenicity of vinyl chloride had been demonstrated in numerous animal toxicological studies and bioassays conducted under the auspices of European vinyl chloride and PVC manufacturers which Pantasote and defendant Gencorp promised to keep secret and did keep secret from the U.S. Government, from employees including Henry Clay Roney, and from the public at large; and,
- j. That the United States Governmental agencies regulating exposure of American workers, plant workers, including Mr. Roney, and the American public-at-large were unaware of secret European studies demonstrating the

association between exposure to vinyl chloride and the development of cancer.

164. The information regarding the health effects of vinyl chloride which Pantasote and defendant Gencorp, individually and through their trade association, the Manufacturing Chemists Association, furnished to the U.S. Government, and which Pantasote and defendant Gencorp provided to employees, including plaintiff's decedent, was incomplete and deliberately misleading with regard to the state of the knowledge of the carcinogenic potential of vinyl chloride.

165. The information Pantasote and defendant Gencorp provided to employees, including plaintiff's decedent, to the United States Government and to the general public concerning the health risks associated with exposure to vinyl chloride was false, incomplete, intentionally and fraudulently misleading and cynically reassuring. Pantasote and defendant Gencorp's employee and public educational efforts were in truth nothing more than deliberate misinformation campaigns conducted with the utterly fraudulent intent to defraud employees, including plaintiff's decedent, customers, the United States Government and the general public as to the true nature and extent of the risk posed by the exposure to vinyl chloride.

166. The information that Pantasote and defendant Gencorp provided to employees, including plaintiff's decedent, and the general public with regard to the extent and nature of known (from the perspective of Pantasote and defendant Gencorp) exposure to vinyl chloride and other carcinogenic chemicals was false, intentionally inaccurate, fraudulently misleading and cynically reassuring;

167. Pantasote and defendant Gencorp knew that the truth about the substantial certainty that vinyl chloride workers would contract cancer, and the truth about the exceedingly high levels of employees' exposure to vinyl chloride, would be bad for business in general as well as

for labor, government and public relations in particular.

168. Plaintiff asserts claims here against Pantasote and defendant Gencorp pursuant to W. Va. Code § 23-4-2(d)(2)(i) and (ii). Pantasote and defendant Gencorp, acting with the deliberately formed and specific intention to injure employees, fraudulently withheld and concealed material information about vinyl chloride health hazards from plaintiff's decedent and his co-workers with the specific intent that they should be and remain ignorant of the true facts regarding the dangers of vinyl chloride knowing that as a result they would suffer injurious exposures to vinyl chloride. Pantasote and defendant Gencorp intended that their employees suffer injury rather than the entities having to incur the risk of lost profits or higher production expenses. Alternatively, Pantasote and defendant Gencorp had actual knowledge of the existence of specific unsafe working conditions that existed in the Point Pleasant plant and that these unsafe working conditions presented a high degree of risk and a strong probability of serious injury or death. The unsafe working conditions included the exposure of workers, including Mr. Roney, to levels of VCM in excess of federal and commonly accepted and well-known industry standards. Notwithstanding their knowledge and of the unsafe working conditions, risk of injury and violation of federal and industry standards, Pantasote and Gencorp intentionally exposed Henry Clay Roney to the unsafe working conditions which proximately caused him to develop angiosarcoma of the liver and then caused his death.

169. While employed and working at the Point Pleasant, West Virginia plant, plaintiff's decedent was exposed to significant doses and levels of vinyl chloride far above those levels permitted by ACGIH or OSHA standards.

170. Pantasote and defendant Gencorp knew of plaintiff's decedent's high levels and doses of vinyl chloride exposures and the fact that the levels of vinyl chloride exposure were far

in excess of permitted ACGIH and OSHA levels.

171. Pantasote and defendant Gencorp knew that plaintiff's decedent was repeatedly being exposed to levels of vinyl chloride in excess of the level which Pantasote and defendant Gencorp professed was the safe exposure limit.

172. At all relevant times defendant Pantasote and defendant Gencorp had knowledge of the existence of dangerous processes, procedures, instrumentalities or conditions in their Point Pleasant, West Virginia plant where Henry Clay Roney worked and associated with the use of and exposure to vinyl chloride. Pantasote and defendant Gencorp knew that plaintiff's decedent worked in the dangerous conditions, operated the dangerous processes and instrumentalities, and followed the dangerous procedures of the Point Pleasant, West Virginia plant.

173. Pantasote and defendant Gencorp knew that if their employees, including Henry Clay Roney, were subjected by their employment to these dangerous processes, procedures, instrumentalities or conditions which involved vinyl chloride, then harm to the employees, including Henry Clay Roney, would occur.

174. Pantasote and defendant Gencorp, under the circumstances set forth above, and with such knowledge, required employees, including Henry Clay Roney, to perform dangerous tasks, exposing them, including Henry Clay Roney, to vinyl chloride.

175. Pantasote and defendant Gencorp, deliberately and knowingly, exposed plaintiff's decedent to dangerous amounts of vinyl chloride without his knowledge or consent.

176. Pantasote and defendant Gencorp acted with a consciously, subjectively and deliberately formed intent to deprive employees, including Mr. Roney, of true and accurate information about the hazards of vinyl chloride, intending that as a result employees would be injured by their dangerous vinyl chloride exposures, rather than having to incur the risk of lost

profits or added production expenses.

177. Pantasote and defendant Gencorp were aware of animal studies dating back to the 1930's showing liver damage from vinyl chloride exposures.

178. Pantasote and defendant Gencorp were aware of studies dating back to the 1940's of vinyl chloride workers in which they were found to have liver damage from vinyl chloride exposure.

179. Pantasote and defendant Gencorp were aware that American workers who had performed the same tasks as plaintiff's decedent, under the same conditions, had suffered liver damage from vinyl chloride exposure. As a result, Pantasote and defendant Gencorp considered vinyl chloride a hepatotoxin.

180. Pantasote and defendant Gencorp were aware by 1959 that exposures to vinyl chloride at a TWA of 500 ppm would cause appreciable injury.

181. Pantasote and defendant Gencorp knew that they took no measures (prior to 1974) to protect plaintiff's decedent from vinyl chloride exposures at levels commensurate with or in excess of those found to cause liver damage in workers and animals.

182. Pantasote's and defendant Gencorp's corporate environmental health departments were responsible for establishing exposure limits for the company, but intentionally refused to impose safe exposure limits because of the negative impact they would have on productivity and profits.

183. Pantasote and defendant Gencorp acted with deliberate intent to injure when they required plaintiff's decedent to work with vinyl chloride so as to experience cancer-causing levels of exposure.

184. As a direct and proximate result of being required by Pantasote and defendant

Gencorp to work with vinyl chloride, plaintiff's decedent was injured, developed hepatic angiosarcoma, experienced severe pain and suffering, mental anguish and prematurely and painfully died.

185. As a direct and proximate result of Pantasote's and defendant Gencorp's intentional tort, Clara Marie Roney, plaintiff's decedent's children and his other next of kin sustained damages including, but not limited to, those for sorrow, mental anguish, and solace, including society, companionship, comfort, guidance, kindly offices and advice of the decedent; compensation for reasonably expected loss of services, protection, care and assistance provided by the decedent; expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death; reasonable funeral expenses; compensation for pain and suffering and loss of enjoyment of life prior to decedent's death, and all other damages as provided for in West Virginia survivorship and wrongful death actions.

COUNT II
Fraud Claim Against Pantasote and Defendant Gencorp

186. Plaintiff incorporates by reference all of the allegations of this pleading as if fully written here.

187. Pantasote and defendant Gencorp acted with the deliberate intent to cause plaintiff's decedent to suffer injury.

188. Pantasote and defendant Gencorp deliberately misrepresented the hazardous and toxic effects of vinyl chloride, thereby acting with the intent to injure plaintiff's decedent, who developed an occupational disease as a direct result.

189. Between 1965 and 1990, while plaintiff's decedent was working as a reactor cleaner and operator helper and operator, Pantasote and defendant Gencorp informed plaintiff's

decedent, based upon SD-56, that the only health hazards from exposure to vinyl chloride were fire, explosion, anesthetic effects and frostbite. Pantasote and defendant Gencorp also trained plaintiff's decedent that the only systemic effect from vinyl chloride was as a mild general anesthetic at concentrations well above 500 ppm and that the 'upper safe limit' for vinyl chloride was 500 ppm.

190. The representations made by Pantasote and defendant Gencorp to the plaintiff's decedent were fraudulent because among other things:

- a. Pantasote and defendant Gencorp deliberately misrepresented that 500 ppm was a safe limit even though it knew that there was no scientific evidence to support this statement; knew that no studies of chronic effects from vinyl chloride at or below 500 ppm (or any other level) had been conducted; and knew that studies showed evidence of liver damage in animals even at 500 ppm;
- b. Pantasote and defendant Gencorp deliberately misrepresented that the only systemic effect of vinyl chloride exposure was as a mild general anesthetic and that the only health hazards were from fire, explosion or frostbite even though they had evidence prior to 1955 of liver damage in both animals and humans from vinyl chloride exposure;
- c. Pantasote and defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that the 500 pm standard was not based upon studies of chronic effects or effects in humans, but just a single test of the acute effect on guinea pigs, while telling him that 500 ppm was a safe exposure limit with a significant margin of safety;
- d. Pantasote and defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that the odor threshold was over 2,000 ppm, not 250 ppm as represented to their employees;
- e. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that European studies in 1947, 1959 and 1963 reported liver injuries to workers exposed to vinyl chloride;
- f. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that in 1959, Dow Chemical researchers found liver damage in animals at exposures of 100 ppm, had not identified a no-effect level, and reported this information to Pantasote and defendant Gencorp;
- g. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to

plaintiff's decedent that in 1959 Dow Chemical told them that extended exposure at a TWA of 500 ppm "is going to produce rather appreciable injury;"

- h. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that Dow Chemical recommended and Ontario, Canada adopted a 50 ppm exposure limit even though Pantasote and defendant Gencorp continued to give assurances that 500 ppm was a safe exposure level;
- i. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that they knew and had experience showing that vinyl chloride was a hepatotoxin;
- j. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that numerous studies reported that vinyl chloride caused liver injuries in workers;
- k. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that by 1964, before decedent began working for them, American workers were suffering from liver injuries known to have been caused by exposure to vinyl chloride;
- l. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that they had no knowledge what his exposures to vinyl chloride were or whether they were even below the 500 ppm TLV because they did not conducted air-monitoring of vinyl chloride levels prior to 1974;
- m. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that they had no knowledge of what the safe exposure limit for vinyl chloride actually was; and
- n. Pantasote and Defendant Gencorp deliberately concealed and refused to disclose to plaintiff's decedent that his work with and exposure to vinyl chloride was not safe.

191. Pantasote's and Defendant Gencorp's corporate officers determined what health and safety information should be disclosed to employees, intentionally deciding not to provide complete, accurate or adequate warnings about the vinyl chloride health hazards.

192. The Pantasote and Gencorp corporate management who had actual knowledge of the nature and extent of the vinyl chloride health hazards included Robert W. Laundrie, M.G. Glen, Phillip R. Sayre, George Burkhardt, John Ertel, Jack Jaglom, Edwin Biehl and Harry Russell.

193. The Pantasote and Gencorp corporate management fraudulently concealed from plaintiff's decedent material facts about vinyl chloride health hazards.

194. During the course of Mr. Roney's employment, plant managers and plant safety personnel provided the inaccurate, incomplete and inadequate warnings and training based on the misinformation contained in SD-56 that plaintiff's decedent relied upon to his detriment. This misinformation was provided as part of initial employment training and thereafter in memoranda, correspondence and training sessions.

195. Plaintiff's decedent relied to his detriment upon the representations of Pantasote and defendant Gencorp, contained within and based upon SD-56, that working with and being exposed to vinyl chloride was safe.

196. As a direct and proximate result of the fraud by Pantasote and defendant Gencorp, Henry Clay Roney suffered serious illness, physical and emotional pain and suffering and ultimately and prematurely died as a result of angiosarcoma of the liver. Furthermore, as a direct and proximate result of Pantasote's and defendant Gencorp's fraud, Clara Marie Roney, plaintiff's decedent's children and his other next of kin sustained damages including, but not limited to, those for sorrow, mental anguish, and solace, including society, companionship, comfort, guidance, kindly offices and advice of the decedent; compensation for reasonably expected loss of services, protection, care and assistance provided by the decedent; expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death; reasonable funeral expenses; compensation for pain and suffering and loss of enjoyment of life prior to decedent's death, and all other damages as provided for in West Virginia survivorship and wrongful death actions.

COUNT III

Civil Conspiracy to Commit Tortious Conduct By All Defendants

197. Plaintiff incorporates by reference all of the allegations of this pleading as if fully rewritten here.

198. All of the defendants, including Gencorp, the Manufacturer/Supplier defendants and the Conspiracy defendants, entered into a conspiracy with Pantasote and each other that by common design and mutual understanding was intended to accomplish unlawful ends and/or to reach lawful ends by unlawful means. Part of this conspiracy involved the defendants, individually and collectively, failing and refusing to give warnings about the true dangers of vinyl chloride; concealing or manipulating technical, medical and scientific information so as to not have to disclose the true dangers of vinyl chloride; failing and refusing to conduct essential research, knowing that the results, if disclosed, would prove that vinyl chloride was a deadly carcinogen; and attempting to delay adoption of standards that would protect exposed workers from the dangers of vinyl chloride.

199. The conspiracy among Pantasote and all defendants was intended to misrepresent and conceal material facts about the nature and extent of the risks of exposure to vinyl chloride and vinyl chloride-containing products from workers, including plaintiff's decedent.

200. The conspiracy involved the common design and mutual understanding among all defendants that the co-conspirators would fraudulently misrepresent and/or conceal material facts about the nature and extent of the risks of vinyl chloride from workers, including employees of the defendants.

201. All of the Manufacturer/Supplier defendants and other defendants conspired with the plaintiff's decedent's employers, Pantasote and defendant Gencorp, to intentionally misrepresent and conceal the hazards of vinyl chloride from plaintiff's decedent; intentionally

not provide safe practices and procedures to protect Mr. Roney from the dangers of vinyl chloride exposure; and to otherwise intentionally engage in tortious conduct, all of which proximately caused the injuries to and death of Henry Clay Roney.

202. All of the defendants conspired with the plaintiff's decedent's employers, Pantasote and defendant Gencorp to commit fraud, proximately causing the injuries to and death of Henry Clay Roney.

203. The conspiracy to engage in tortious misconduct included:

- a. fraudulently misrepresenting, suppressing and concealing information relating to the hazards of vinyl chloride;
- b. consciously, knowingly, intentionally, and willfully disregarding an obvious and imminent danger of serious injury or death to persons exposed to vinyl chloride, including plaintiff's decedent;
- c. failing and refusing to take precautions to avoid reasonably foreseeable injuries to workers, including plaintiff's decedent, who would be exposed to defendants' products;
- d. intentionally permitting the overexposure of plaintiff's decedent to vinyl chloride without his informed consent.
- e. agreeing to misrepresent that 500 ppm was a safe exposure limit when defendants knew that was not a fact; and
- f. agreeing not to study health effects from vinyl chloride exposure in a timely manner.

204. Although plaintiff's decedent voluntarily went to work, he was unaware of the true dangers associated with vinyl chloride exposure and was unaware of the true nature and extent of the risks associated with working in areas contaminated with vinyl chloride.

205. The following overt tortious acts were committed against plaintiff's decedent by Pantasote or one or more of the defendants in furtherance of their conspiracy:

- a. exposing plaintiff's decedent to hazardous levels of vinyl chloride without his knowledge or informed consent;

- b. failing and refusing to provide adequate industrial hygiene controls and personal protective equipment to reduce or eliminate the dangerous effects of vinyl chloride;
- c. failing and refusing to provide adequate warnings regarding the dangers and health effects of exposure to vinyl chloride;
- d. failing and refusing to reasonably test or investigate the dangerous propensities associated with vinyl chloride;
- e. participating in an industry-wide effort to fail and refuse to reasonably test or investigate the potential adverse health effects posed by the use of vinyl chloride in the work-place, including the concerted effort to misrepresent, misclassify, alter, and suppress epidemiological and toxicological studies, data, and other information concerning the toxicity of vinyl chloride;
- f. participating in an industry-wide effort to consciously fail to protect plaintiff's decedent, and other workers whose employment responsibilities exposed them to vinyl chloride of potential cancers, vinyl chloride disease, and other ill health effects associated with exposure to vinyl chloride, including misrepresentation, misclassification, alteration, and suppression of epidemiological and toxicological studies, data, and other information relating to the toxicity of vinyl chloride;
- g. participating in an industry-wide effort to improperly influence, manipulate, alter, and misclassify epidemiological and toxicological data and scientific findings as reported by research concerning the health risks of vinyl chloride in the medical and trade literature;
- h. participating in an effort to suppress knowledge concerning the toxicity and carcinogenicity of vinyl chloride that could be obtained by workers exposed to vinyl chloride, the government, and the general public;
- i. participating in a concerted effort to continue the manufacture, marketing and distribution of a knowingly defective product;
- j. falsely stating that 500 ppm was a safe exposure level when this was known not to be a fact.

206. Pantasote and the defendants carried out their conspiracy in part by acting through the following organizations:

- a. The Manufacturing Chemists Association ("MCA") Ad Hoc Planning Group for vinyl chloride Research; MCA Environmental Health and Advisory Committee; MCA Executive Committee; MCA General Safety Committee; MCA IH and Monitoring Sub-Task Group; MCA Labels and Precautionary Committee; MCA Medical Advisory Committee; MCA Occupational Health Committee ("MCA

OHC"); MCA Plastics Committee; MCA Safety and Fire Protection Committee; MCA VC Research Coordinators; VC Conference - 11/16/71; MCA Presentation to EPA - 4/2/74; ab

- b. The MCA or Chemical Manufacturers Association ("CMA") Vinyl Panel, which includes: MCA Technical Task Group on VC Research; MCA Tech Panel for VC Research; CMA VC Project Panel; CMA VC Industry Representative Committee; CMA VC Program Panel; CMA VC Panel; CMA VC Panel; CMA VC Health Committee; Special Projects Advisory Group; Special Programs Advisory Committee; Special Programs Review Committee; Special Programs Policy Committee; PVC Producers; PVC Resin Producers; vinyl chloride Safety Association; The Society of Plastics Industry, Inc. ("SPI") VI Health Safety & Environment Committee; SPI Public Affairs Committee; and SPI VCM & PVC Producers Group.

A: The conspiracy perpetrated the fraud that VC was harmless at exposures below 500 parts per million (ppm) through the creation, publication and dissemination of SD-56.

207. In 1953, the MCA, along with the active participation of the CMA Vinyl Panel and the MCA OHC, produced a chemical safety data sheet for vinyl chloride monomer known as SD-56 which stated that the injury hazard of vinyl chloride monomer was from explosion, fire and frostbite burns, that there were no hazards when exposures were below 500 ppm, and that above 500 ppm the only hazard was an anesthetic effect.

208. Pantasote and the defendants by agreement disseminated SD-56 to be used throughout the vinyl chloride industry and to be relied upon by employers, including Pantasote and defendant Gencorp, employees in the industry, including the plaintiff's decedent, and customers. Pantasote and defendants intended and agreed that the information in SD-56 would be the only information given to employees, customers and workers.

209. Despite having specific knowledge that statements and representations set forth in the SD-56 were false, incomplete and omitted material facts, Pantasote and defendants continued to promote SD-56 throughout the 1950s, 1960s and 1970s. The specific knowledge of Pantasote and the defendants included, but is not limited to the following:

- a. The earliest studies in the 1930's and 1940's showed liver damage from exposure to vinyl chloride;
- b. Reports from Europe in the 1940's and 1950's indicated vinyl chloride workers developed liver damage;
- a. As early as the 1950s, workers exposed to vinyl chloride had idiosyncratic injuries that were peculiar to vinyl chloride exposure;
- d. The defendants' own experiments on animals showed that animals were injured when exposed to concentrations of vinyl chloride as low as 50 ppm;
- e. Studies done in Europe in 1964, 1969 and 1970, and secretly provided to the conspiring defendants showed injuries to workers exposed to vinyl chloride; and
- f. By 1965 vinyl chloride was known to be a hepatotoxin.

210. The following entities, along with Pantasote and Gencorp agreed to make and participate in false statements or to substantially assist regarding the false and fraudulent SD-56

Chemical Data Sheet:

- Air Products
- The American Chemistry Counsel
- Borden
- Firestone
- Conoco
- Dow Chemical
- Ethyl
- B.F. Goodrich
- Goodyear
- Honeywell (Allied Chemical)
- Monsanto
- Occidental
- Olin
- PPG, Inc.
- Rhone-Polenc
- Shell
- Tenneco
- Union Carbide
- Uniroyal
- Zeneca

B: The conspiracy to conduct fraudulent medical examinations, experiments and studies.

211. Beginning in the 1950's and continuing into the 1980's, Pantasote and the defendants conducted medical tests on their own workers, including the plaintiff's decedent, and concealed from the workers the purpose of the testing and the nature of the findings. In addition, defendants failed to tell employees about the injuries caused by vinyl chloride found in company examinations, and the causes of the workers' injuries.

212. The following entities agreed to fraudulently conceal and affirmatively misrepresent the results of medical testing on vinyl chloride workers:

- Air Products
- Chemical Manufacturers Association
- Borden
- Firestone
- Conoco
- Dow Chemical
- Ethyl
- Gencorp
- Georgia Pacific
- B.F. Goodrich
- Goodyear
- Honeywell (Allied Chemical)
- Monsanto
- Occidental
- Olin
- PPG, Inc.
- Rhone-Polenc
- Shell
- Tenneco
- Union Carbide
- Uniroyal
- Zeneca

213. In the mid-1960s and continuing through the 1980s, Pantasote and the defendants agreed to assist in the publication of scientific studies that they had designed and altered to conceal the hazards of vinyl chloride.

214. Beginning in the early 1970s, Pantasote and the defendants commissioned and controlled a series of epidemiological studies to fraudulently conceal the extent of cancers caused by vinyl chloride. The initial corruption of the databases was recognized by subsequent contractors hired to perform further analysis or updates of this same cohort. To fraudulently conceal the extent of cancer caused by vinyl chloride, Pantasote and the conspiring defendants made sure that certain plants were studied in a way that was inconsistent with how other plants were studied; that persons who were not independent and impartial were allowed to shuffle employees in or out of the cohort or shuffle employees' exposure classifications without any review or factual justification; and that, even in the 1980s, completely non-independent employees like plant managers or personnel officers were allowed to classify members of the cohort one way when they were alive and another way when they were dead. Pantasote and defendants knew that their scientific studies were, and intended them to be, false and misleading

215. The following entities agreed with Pantasote to conduct fraudulent scientific studies and to manipulate data so as to minimize and misrepresent the known harm of exposure to vinyl chloride:

- Air Products
- Chemistry Manufacturers Association
- Borden
- Firestone
- Conoco
- Dow Chemical
- Ethyl
- Gencorp
- Georgia Gulf
- Georgia Pacific
- B.F. Goodrich
- Goodyear
- Gulf Oil
- Monsanto
- Occidental
- Olin

- PPG Inc.,
- Rhone-Polenc
- Shell
- Tenneco
- Union Carbide
- Uniroyal
- Zeneca

C: The conspiracy to enter into a secrecy pact regarding the carcinogenicity of VC.

216. Pantasote and the defendants agreed to conceal their knowledge of the carcinogenicity of vinyl chloride from plaintiff's decedent, vinyl chloride workers and fabricators, the United States Government and the public at large.

217. A written "Secrecy Agreement" was entered into among American vinyl chloride producers and the sponsors of the European cancer research, Solvay et Cie, Imperial Chemicals Industries (ICI), and other European vinyl chloride manufacturers.

218. By September 20, 1972, Pantasote and the defendants agreed to the "Secrecy Agreement" which their agent, MCA, had negotiated on their behalf. By the end of 1972, each American vinyl manufacturer who belonged to the MCA vinyl panel had signed a "direct pledge" of secrecy. Additionally, every company that was allowed to participate in any of the meetings in which the secret European findings were discussed also signed or made such a secrecy agreement. The companies on the CMA Vinyl Panel who were parties to this particular secrecy agreement included: Air Products and Chemical Co., Allied Chemical Company, Borden Chemical Div. of Borden, Inc., Conoco, Dow Chemical Company, Ethyl Corporation, B.F. Goodrich Company, PPG, Inc. Chemical Division, Shell Chemical Company, Tenneco Chemicals, Inc., Stauffer Chemical Company, Union Carbide Corporation, Uniroyal, Inc., MCA, and ICI Mond Division. The Vinyl Chloride Research Coordinators were representatives from B.F. Goodrich Company, Dow Chemical Company, Ethyl Corporation, PPG Industries, Inc.

Chemical Division, Shell Chemical Company, Union Carbide Corporation, MCA, and ICI Mond Division.

219. In furtherance of their conspiracy and fraud, every company that signed the secrecy agreement destroyed it to conceal the defendants' prior misconduct, with the following three exceptions: Conoco, Dow Chemical Company, and Monsanto Company. Further, as part of a continuing conspiracy, MCA and CMA (now known as the ACC) have completely destroyed all copies of the secrecy agreements they solicited.

220. Pantasote and defendants by agreement concealed their knowledge of the carcinogenicity of vinyl chloride by, among other things:

- a. concealing the existence of studies discussed in their own meetings;
- b. concealing their knowledge of the Italian studies by Maltoni and Viola showing that vinyl chloride caused cancer in laboratory animals;
- c. concealing from the United States government their knowledge of studies showing vinyl chloride caused cancer (in response to requests from OSHA and NIOSH requesting all knowledge of the defendants about the toxicity of vinyl chloride);
- d. concealing from plaintiff's decedent and all other vinyl chloride workers and fabricators the true results of their own studies.

221. The conspiracy among Pantasote and defendants was intended to misrepresent and conceal material facts about the nature and extent of the risks of exposure to vinyl chloride and vinyl chloride-containing products from plaintiff's decedent and all other vinyl chloride workers and fabricators.

222. The conspiracy involved the common design, substantial assistance and mutual understanding among all the conspiring defendants that the co-conspirators would misrepresent and conceal material facts about the nature and extent of the risks of vinyl chloride and vinyl chloride-containing products from workers, including plaintiff's decedent and employees of the

conspiring defendants and employees of customers.

223. The following entities agreed with Pantasote to conceal the carcinogenicity of VC:

- Air Products
- CMA
- Borden
- Firestone
- Conoco
- Dow Chemical
- Ethyl
- Gencorp
- Georgia Pacific
- Goodrich
- Goodyear
- Gulf Oil
- Honeywell
- Monsanto
- Occidental
- Olin
- PPG
- Rhone-Polenc
- Shell
- Tenneco
- Union Carbide
- Uniroyal
- Zeneca

D: The conspiracy to use measurement techniques that were known to produce inaccurate results that falsely underreported the level of VC in the workplace and agreement to misrepresent the odor threshold for VC.

224. Pantasote and the defendants knowingly and intentionally exposed plaintiff's decedent and other vinyl chloride workers to dangerous levels of vinyl chloride by falsely underreporting vinyl chloride exposure levels. Pantasote and defendants knew that the devices they were using to measure VC exposures to workers underestimated the actual levels of VC in the workers exposure. Pantasote and defendants continued to use faulty measurement devices and under-reported exposures even though the techniques for accurately measuring exposures

were available.

225. Pantasote and defendants knowingly and intentionally misrepresented the “odor threshold” in order to misrepresent exposures and injuries from VC. They deliberately claimed that the odor threshold was below what Pantasote and defendants claimed were safe exposures.

226. When Pantasote and the defendants finally admitted that vinyl chloride was harmful at levels below those that they had previously claimed to be safe, they then reported that the odor threshold of vinyl chloride was much higher to perpetrate the fraud that exposures after 1974 were safe and that apparent injuries were due to very high past exposures that no longer existed.

227. As a direct and proximate result of the overt tortious acts committed by Pantasote and the defendants in pursuance of their conspiracy, the plaintiff’s decedent was unaware of the true health risks associated with the exposure to vinyl chloride.

228. As a further direct and proximate result of the overt tortuous acts committed in pursuance of their conspiracy, the plaintiff’s decedent, during the course and scope of his employment by Pantasote and Gencorp, was exposed to toxic levels of vinyl chloride, which directly and proximately caused him to develop hepatic angiosarcoma and to suffer a premature and painful death.

229. Each of the foregoing tortious acts were performed by Pantasote and the defendants:

- a. in concert with each other;
- b. pursuant to the conspiracy;
- c. with the knowledge of each defendant that the other defendants’ and Pantasote’s conduct constituted a breach of duty to the plaintiff’s decedent which each defendant gave substantial assistance or encouragement to accomplish; and
- d. with a common design among Pantasote and the defendants and with substantial

assistance from the other defendants to accomplish the result of harming workers, including plaintiff's decedent.

230. All of the defendants herein are liable jointly and severally for the acts and omissions of Pantasote and the other defendants.

231. The defendants' tortious misconduct described above was committed with the malicious motive of endangering lives for the sake of profits.

232. As a direct and proximate result of the overt acts committed by Pantasote and the defendants in furtherance of their conspiracy, plaintiff's decedent incurred substantial medical expenses, suffered severe pain of mind and body, disability, limitation, loss of the pleasure of life and loss of both past and future wages, and ultimately, a premature death.

233. The tortious misconduct and overt acts of Pantasote and defendants, as set forth above and throughout the Complaint, was the proximate cause of the death of Henry Clay Roney. Furthermore, as a direct and proximate result of Pantasote's and defendant Gencorp's intentional tort, Clara Marie Roney, plaintiff's decedent's children and his other next of kin sustained damages including, but not limited to, those for sorrow, mental anguish, and solace, including society, companionship, comfort, guidance, kindly offices and advice of the decedent; compensation for reasonably expected loss of services, protection, care and assistance provided by the decedent; expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death; reasonable funeral expenses; compensation for pain and suffering and loss of enjoyment of life prior to decedent's death, and all other damages as provided for in West Virginia survivorship and wrongful death actions.

COUNT IV
Aiding and Abetting Pantasote and Defendant Gencorp

234. Plaintiff incorporates by reference all of the allegations of this pleading as if fully rewritten here.

235. All of the Manufacturer/Supplier defendants and Conspiracy defendants provided substantial assistance so as to aid and abet Pantasote and defendant Gencorp in the employer intentional tort perpetrated against plaintiff's decedent.

236. All of the Manufacturer/Supplier defendants and Conspiracy defendants provided substantial assistance so as to aid and abet Pantasote and defendant Gencorp in the fraud perpetrated against plaintiff's decedent. The defendants knew that the conduct of plaintiff's decedent's employers, Pantasote and defendant Gecorp, constituted a breach of duty to Henry Clay Roney amounting to an a deliberate intent to injure and fraud against plaintiff's decedent.

237. The defendants gave substantial assistance and encouragement to the defendant employers, Pantasote and defendant Gencorp, to carry out their tortious conduct so as to breach their duty to Henry Clay Roney and commit a deliberate intentional tort and fraud against plaintiff's decedent.

238. The defendants knew that their conduct aided and abetted Pantasote and defendant Gencorp in their breach of duty and wrongdoing, including their deliberate intent to injure and fraud.

239. The defendants provided substantial assistance to Pantasote and defendant Gencorp, plaintiff's decedent's employers, by assisting in the drafting, approval, publication and dissemination of SD-56, which was a deliberately misleading and fraudulent MCA chemical safety data sheet that was provided to plaintiff's decedent and other vinyl chloride workers, and which Pantasote and Gencorp relied upon as the basis for their warnings and training given to

employees, including Henry Clay Roney.

240. SD-56 was deliberately misleading and fraudulent because it contained representations that defendants knew were false; representations that defendants knew could not be supported by fact; and material omissions of facts that defendants knew were needed to intelligently evaluate the true risk of working with and of exposure to vinyl chloride.

241. The substantial assistance which the defendants provided to the plaintiff's decedent's employers also included, but is not limited to (1) deliberately limiting the warnings in SD-56 to fire, explosion and risk of burns while identifying the only systemic effect as mild general anesthesia, when the defendants had clear evidence of chronic injury and liver damage and did not have facts to support the statements made in SD-56, including the statement that 500 ppm was a safe exposure level; (2) deliberately failing and refusing to provide accurate, complete and adequate warnings about the dangers of vinyl chloride exposure when the aiding and abetting defendants knew that Pantasote and Gencorp, Henry Clay Roney's employers, were not providing accurate, complete or adequate warnings; (3) deliberately failing and refusing to conduct tests or investigations to determine the systemic and chronic effects of vinyl chloride exposure; (4) deliberately failing and refusing to conduct tests or investigations to identify the safe exposure level to prevent both acute and chronic injuries from short and long term exposures; (5) deliberately failing and refusing to conduct tests or investigations to identify reasonable and necessary protective measures, including engineering controls, personal protective equipment and administrative controls; and (6) deliberately failing and refusing to conduct epidemiological investigations to identify health effects in vinyl chloride workers.

242. Defendants' purpose in concealing the risks of vinyl chloride was to develop the

PVC industry, and thereby reap enormous profits, without the risk of adverse worker, government or public reactions to vinyl chloride due to the risk of liver injury or cancer.

243. The defendants aided and abetted Pantasote and Gencorp so as to maintain a uniform 500 ppm exposure standard without risk of the standard being lowered to a level that PVC manufacturers claimed they could not meet or which would require additional expenditures to meet.

244. The substantial assistance and encouragement provided to plaintiff's decedent's employers was a substantial factor in, and proximate cause of, the injury to and death of Henry Clay Roney and the injuries to Clara Marie Roney, decedent's children and other next of kin.

245. The substantial assistance and encouragement provided to plaintiff's decedent's employer proximately caused plaintiff's decedent to suffer serious illness, physical and emotional pain and suffering, and ultimately his premature death from hepatic angiosarcoma.

246. As a direct and proximate result of the substantial assistance and encouragement provided to plaintiff's decedent's employers, Clara Marie Roney, plaintiff's decedent's children and his other next of kin sustained damages including, but not limited to, those for sorrow, mental anguish, and solace, including society, companionship, comfort, guidance, kindly offices and advice of the decedent; compensation for reasonably expected loss of services, protection, care and assistance provided by the decedent; expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death; reasonable funeral expenses; compensation for pain and suffering and loss of enjoyment of life prior to decedent's death, and all other damages as provided for in West Virginia survivorship and wrongful death actions.

COUNT V

Breach of Duty to Warn of Manufacturer/Supplier Defendants

247. Plaintiff incorporates by reference all of the allegations of this pleading as if fully rewritten herein.

248. Each Manufacturer/Supplier defendant designed, formulated, created, made, manufactured, processed, produced, sold, distributed, prepared, blended, packaged, labeled and/or otherwise put into the stream of commerce, the vinyl chloride to which plaintiff's decedent was exposed during the course of his employment, and which the Manufacturer/Supplier defendants knew, or in the exercise of ordinary care should have known, were highly hazardous to the health and well-being of workers, including the plaintiff's decedent.

249. Each Manufacturer/Supplier defendant knew that its vinyl chloride contained latent defects and was defective, dangerous, harmful and unsafe for its intended use,

250. At all relevant times the Manufacturer/Supplier defendants had actual and constructive knowledge that their vinyl chloride was capable of causing severe injuries and death when used in a manner consistent with its intended and foreseeable purpose and use.

251. At all times material hereto the Manufacturer/Supplier defendants knew that the vinyl chloride which they manufactured and/or supplied to the Point Pleasant plant was inherently and unreasonably dangerous and defective when used in the intended and reasonably foreseeable manner.

252. At all times material hereto the Manufacturer/Supplier defendants knew that Henry Clay Roney and other similarly situated chemical workers, during the usual course of their employment, and through the ordinary foreseeable use of the vinyl chloride, would on a regular basis be exposed to and would inhale, absorb and ingest vinyl chloride fumes and vapors.

253. At all times material hereto the Manufacturer/Supplier defendants knew Pantasote and Gencorp, plaintiff's decedent's employers, were not providing their employees including Henry Clay Roney, with accurate, complete or adequate warnings about vinyl chloride hazards.

254. The latent defects and unsafe condition of each Manufacturer/Supplier defendant's vinyl chloride supplied to the Point Pleasant plant created a duty to warn users, including plaintiff's decedent, of the latent defects and unsafe conditions of the products.

255. At all times material hereto, the Manufacturer/Supplier defendants owed a duty of due and reasonable care to Henry Clay Roney and other similarly situated persons to provide them with accurate and complete warnings about the dangers of vinyl chloride, including chronic health hazards resulting from long-term exposures to vinyl chloride. The Manufacturer/Supplier defendants failed to assure that such warnings accompanied the vinyl chloride or were provided to Henry Clay Roney and his fellow workers.

256. The Manufacturer/Supplier defendants breached their duty of due and reasonable care by the following conduct: a) failing to properly test and investigate the dangers posed to chemical workers such as Henry Clay Roney by their vinyl chloride products; and b) failing to provide proper, adequate and correct warnings and instructions for proper and safe use concerning the dangers posed to the persons using, handling or exposed to their vinyl chloride products.

257. The Manufacturer/Supplier defendants breached their duty to warn plaintiff's decedent in one, some or all of the following respects, among others, and this breach of duty was a proximate cause of plaintiff's decedent's illness and death:

- a. by failing to timely and adequately warn plaintiff's decedent of the dangerous

characteristics and serious health hazards associated with exposure to vinyl chloride;

- b. by failing to provide plaintiff's decedent with information as to what would be reasonably safe and sufficient wearing apparel and proper personal protective equipment and appliances to protect plaintiff's decedent from being harmed by exposure to vinyl chloride;
- c. by failing to send timely and adequate warnings with containers of vinyl chloride to warn plaintiff's decedent of the dangers to his health from coming into contact with vinyl chloride; and
- d. by failing to take reasonable precautions or exercise reasonable care to publish, adopt and enforce a safety plan and/or safe method of handling vinyl chloride.

258. As a direct and proximate result of the Manufacturer/Supplier defendants' breach of duty to warn, plaintiff's decedent suffered serious illness, physical and emotional pain and suffering, and ultimately prematurely died of hepatic angiosarcoma.

259. As a direct and proximate result of the Manufacturer/Supplier's failure to warn, Clara Marie Roney, plaintiff's decedent's children and his other next of kin sustained damages including, but not limited to, those for sorrow, mental anguish, and solace, including society, companionship, comfort, guidance, kindly offices and advice of the decedent; compensation for reasonably expected loss of services, protection, care and assistance provided by the decedent; expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death; reasonable funeral expenses; compensation for pain and suffering and loss of enjoyment of life prior to decedent's death, and all other damages as provided for in West Virginia survivorship and wrongful death actions.

COUNT VI
Strict Liability in Tort of Manufacturer/Supplier Defendants

260. Plaintiff incorporates by reference all of the allegations of this pleading as if fully rewritten here.

261. Plaintiff's decedent was exposed to vinyl chloride that was manufactured and/or supplied by the Manufacturer/Supplier defendants and/or their predecessors-in-interest for use in industrial operations.

262. The Manufacturer/Supplier defendants are engaged in the business of selling vinyl chloride, and plaintiff's decedent was exposed to these defendants' vinyl chloride without substantial change in the condition in which it was sold, and with the defects existing at the time the product left the hands of the defendants.

263. The vinyl chloride supplied by the Manufacturer/Supplier defendants was in a defective condition at the time it left the hands of defendants because it was not of good and merchantable quality fit and safe for its use; was unreasonably dangerous for its intended uses; and because defendants failed and refused to provide accurate, complete or adequate warnings of vinyl chloride health hazards.

264. During the period of time that plaintiff's decedent was exposed to the vinyl chloride of the Manufacturer/Supplier defendants, the VCM was being utilized in a manner that was intended by and reasonably foreseeable to defendants.

265. The Manufacturer/Supplier defendants knew or should have known that their vinyl chloride would be used without accurate, adequate or complete warnings being provided by plaintiff's decedent's employers

266. By placing the vinyl chloride products in the market, these defendants represented that it would safely do the job for which it was intended.

267. Plaintiff's decedent was unaware of the hazards and defects in the vinyl chloride of the Manufacturer/Supplier defendants that made it unsafe for purposes of processing and use.

268. Plaintiff's decedent worked with and in close proximity to the Manufacturer/Supplier defendants' vinyl chloride, and his presence was known to, or ought to have reasonably been anticipated by, the Manufacturer/Supplier defendants.

269. The Manufacturer/Supplier defendants are strictly liable for the manufacture and sale of defective vinyl chloride that proximately caused the injury to and death of plaintiff's decedent, particularly where these defendants failed to exercise reasonable care to inform plaintiff's decedent of the dangerous condition of their products.

270. The Manufacturer/Supplier defendants gave an implied warranty that their vinyl chloride was of good and merchantable quality and fit for its particular intended use.

271. The Manufacturer/Supplier defendants breached their implied warranty because the vinyl chloride gave off harmful, poisonous and deleterious gases when and where plaintiff's decedent carried out his duties working with and around the vinyl chloride.

272. As a direct and proximate result of the Manufacturer/Supplier defendants' manufacture and sale of defective products, and the breach of the implied warranty of good and merchantable quality and fitness for the particular intended use, plaintiff's decedent suffered serious injuries, serious illness, physical and emotional pain and suffering, and ultimately and prematurely died of hepatic angiosarcoma.

273. As a direct and proximate result of the Manufacturer/ Supplier defendants' manufacture and sale of defective products and their breach of the implied warranty of good and mercantile quality and fitness for the intended purpose, Clara Marie Roney, plaintiff's decedent's

children and his other next of kin sustained damages including, but not limited to, those for sorrow, mental anguish, and solace, including society, companionship, comfort, guidance, kindly offices and advice of the decedent; compensation for reasonably expected loss of services, protection, care and assistance provided by the decedent; expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death; reasonable funeral expenses; compensation for pain and suffering and loss of enjoyment of life prior to decedent's death, and all other damages as provided for in West Virginia survivorship and wrongful death actions.

274. The Manufacturer/Supplier defendants are strictly liable for the injury to and death of plaintiff's decedent proximately caused by his exposure to their vinyl chloride.

Count VII
Fraud by Manufacturer/Suppliers Defendants

275. Plaintiff incorporates herein by reference all of the allegations of this pleading as if fully rewritten herein.

276. The Manufacturer/Supplier defendants knew and possessed medical and scientific data and other information which clearly established that vinyl chloride was hazardous to the health and safety of plaintiff's decedent and persons like plaintiff's decedent whose employment responsibilities exposed them to vinyl chloride.

277. The Manufacturer/Supplier defendants knew and fraudulently concealed that plaintiff's decedent's exposure to vinyl chloride posed a great risk of him developing cancer or disease subsequent to his exposure, and failed to properly advise or inform plaintiff's decedent of this danger.

278. The Manufacturer/Supplier defendants knew that plaintiff's decedent and persons

like plaintiff's decedent whose employment responsibilities exposed them to vinyl chloride did not know, or possess the information to know, that vinyl chloride is very hazardous to their health and safety.

279. With the intent to deceive the government, the general public, and workers, including plaintiff's decedent, whose employment responsibilities exposed them to vinyl chloride, and with the intent that these persons and entities were and should remain ignorant of such medical and scientific data, and with the further intent to induce them to alter their position so as to be subject to injury and/or increased risk, and in order to gain an economic advantage, the Manufacturer/Supplier defendants made material misrepresentations of fact, concealed material facts where they had a duty to disclose such facts, and presented as fact matters which they either knew to be false or knew could not be established as fact.

280. The misrepresentations and concealment of material facts included the following:

- a. The Manufacturer/Supplier defendants deliberately caused to be presented as a matter of fact to workers, including plaintiff's decedent, whose employment responsibilities exposed them to vinyl chloride that it was safe for said persons to work with and in proximity to such materials;
- b. The Manufacturer/Supplier defendants deliberately failed to recommend to workers, including plaintiff's decedent, the use of respirators and other personal protective equipment when they were required to work in areas where they would be exposed to the Manufacturer/Supplier defendants' VCM even though the Manufacturer/Supplier defendants knew that such protective measures were necessary and that if such protective devices were not used it would result in injury to and the death of said persons;
- c. The Manufacturer/Supplier defendants deliberately concealed from workers, including Plaintiff's decedent, whose employment responsibilities exposed them to vinyl chloride the true nature of industrial exposure to vinyl chloride, in that the Manufacturer/Supplier defendants knew that VCM would be released in the polymerization process and while cleaning reactors and that upon inhalation of vinyl chloride, workers who were exposed to vinyl chloride were at risk of developing cancer and dying;

- d. The Manufacturer/Supplier defendants deliberately concealed from workers, including plaintiff's decedent, whose employment responsibilities exposed them to vinyl chloride the fact that vinyl chloride would cause pathological effects without noticeable trauma;
- e. The Manufacturer/Supplier defendants deliberately failed to provide medical and scientific information to the government, the medical community, workers, including plaintiff's decedent, and the public at large as to the true nature of the hazards of vinyl chloride and actively concealed material medical and scientific facts;
- f. The Manufacturer/Supplier defendants deliberately failed to provide workers, including plaintiff's decedent, whose employment responsibilities exposed them to vinyl chloride with reasonable safe operating instructions, policies and procedures; and
- g. The Manufacturer/Supplier defendants deliberately suppressed damaging research data and manufactured fraudulent science regarding the health effects of exposure to vinyl chloride.

281. The Manufacturer/Supplier defendants had a duty to users of their vinyl chloride, including workers such as Plaintiff's decedent whose employment responsibilities exposed them to vinyl chloride, to reveal the full nature and extent of the dangers of vinyl chloride.

282. The Manufacturer/Supplier defendants knowingly and fraudulently misrepresented and concealed the dangers of vinyl chloride from the government, the medical community, the general public and workers, including plaintiff's decedent, whose employment responsibilities exposed them to vinyl chloride.

283. The Manufacturer/Supplier defendants engaged in said fraudulent concealment and misrepresentations because they knew that to do otherwise would invoke fear and apprehension in persons who would be exposed to vinyl chloride, would cause the government to develop more stringent regulations regarding vinyl chloride and would ultimately result in a decrease in sales of and profits from vinyl chloride.

284. The facts fraudulently concealed and misrepresented by the Manufacturer/Supplier defendants were material to plaintiff's decedent's decision to work with, near and/or be exposed to vinyl chloride.

285. Said fraudulent concealment and representations were made by the Manufacturer/Supplier defendants with the intent to deceive and mislead and to be relied upon by workers, including plaintiff's decedent, whose employment responsibilities exposed them to vinyl chloride.

286. Plaintiff's decedent relied upon said misrepresentations to his detriment and this reliance was reasonable and justified. For example, the plaintiff's decedent relied, to his detriment, upon SD-56, the materially false safety data sheet, supplied by the defendants. Plaintiff's decedent also, relied, to his detriment, upon other statements made and documents provided to him by defendants indicating that his work was safe and that there was no risk of cancer from his vinyl chloride exposures.

287. As a direct and proximate result of the Manufacturer/Supplier defendants' fraudulent concealment and misrepresentations, plaintiff's decedent, during the course and scope of his employment, was exposed to toxic levels of vinyl chloride, which directly and proximately caused him to develop hepatic angiosarcoma.

288. As a direct and proximate result of the Manufacturer/Supplier defendants' fraudulent concealment and misrepresentations described above, Clara Marie Roney, plaintiff's decedent's children and his other next of kin sustained damages including, but not limited to, those for sorrow, mental anguish, and solace, including society, companionship, comfort, guidance, kindly offices and advice of the decedent; compensation for reasonably expected loss

of services, protection, care and assistance provided by the decedent; expenses for the care, treatment and hospitalization of the decedent incident to the injury resulting in death; reasonable funeral expenses; compensation for pain and suffering and loss of enjoyment of life prior to decedent's death, and all other damages as provided for in West Virginia survivorship and wrongful death actions.

Count VIII
Punitive Damages Against all Defendants

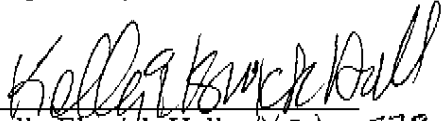
289. Plaintiff incorporates by reference all of the allegations of this pleading as if fully rewritten here.

290. The conduct of defendants and their predecessors-in-interest, as specifically alleged in this Complaint, whether taken separately or together, constituted a pattern or practice of intentional wrongful conduct and actual malice causing substantial harm and proximately causing damages and injuries to the plaintiff and plaintiff's decedent.

291. Defendants and their predecessors-in-interest acted willfully, recklessly, maliciously, wantonly and deliberately, with a conscious and flagrant disregard for the rights and safety of plaintiff and plaintiff's decedent and deliberately engaged in fraud, willful and wanton misconduct and malice with regard to the plaintiff and plaintiff's decedent and should be held liable for punitive and exemplary damages.

WHEREFORE, plaintiff demands judgment against all defendants, jointly and severally, for compensatory damages in an amount as yet to be determined, but in excess of \$5,000,000.00 and for punitive damages, in an amount as yet to be determined, but in excess of \$5,000,000.00.

Respectfully submitted,


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JURY DEMAND

Plaintiff hereby demands a trial by jury.

A handwritten signature in black ink, appearing to read 'A. S. Lipton', written over a horizontal line.

Andrew S. Lipton (0009191)